MAINE DEPARTMENT OF
LABOR
20 Union Street – Augusta, Maine 04333

Publication Series No. SAPI-4

BUREAU OF EMPLOYMENT SECURITY
Division of Economic Analysis and Research

ANNUAL PLANNING INFORMATION

MAINE STATEWIDE Fiscal 1983

Labor Market Information

BEST AVAILABLE COPY

ANNUAL PLANNING INFORMATION
MAINE STATEWIDE
FISCAL 1983

DIVISION OF ECONOMIC ANALYSIS AND RESEARCH

Ray A. Fongemie, Director

A Publication Developed by the Labor Market Evaluation and Planning Section

Dana A. Evans, Chief

ISSUED JUNE 1982 AUGUSTA, MAINE

Published under Appropriation No. 03444.2

PREFACE AND ACKNOWLEDGEMENT

This publication, Annual Planning Information, Maine Statewide, is the fourth in a series of annual reports concerning labor market information needed for employment and training program planning and development. Population groups in need of program services are identified. An analysis of the industrial-occupational structure of the Maine economy and the changes in this structure provides planners with a detailed assessment of job opportunities for potential training and placement.

The Division of Economic Analysis and Research gratefully acknowledges the contribution of the State Employment and Training Council (SETC), Jane C. Weed, Executive Director. Featured within the analysis of available job opportunities is the occupation-indicator matrix. This matrix, utilizing occupational employment data files of the Division of Economic Analysis and Research, and the accompanying analysis concerning occupations for potential training and placement were developed by Wilfred E. Richard of the SETC.

Any questions or comments regarding the contents of this publication should be directed to Dana A. Evans, Chief, Labor Market Evaluation and Planning Section, Maine Department of Labor, Bureau of Employment Security, Division of Economic Analysis and Research, 20 Union Street, Augusta, Maine 04330, or by telephone at 207-289-2271.

Raynold A. Fongemie, Director
DIVISION OF ECONOMIC ANALYSIS AND RESEARCH

TABLE OF CONTENTS

SECTION		PAGE
I.	INTRODUCTION	1
II.	IDENTIFICATION OF POPULATION GROUPS IN NEED OF EMPLOYMENT PROGRAM SERVICES	5
	The Maine Population, 1970-1980	7
	Demographic Characteristics of the Maine Population, 1970 and 1980	11
	Changes in Maine's Labor Force Since 1970	15
	School Enrollments and Dropouts	23
	Income and Income Assistance Programs	28
	Characteristics of Applicants Registered with the Bureau of Employment Security	41
	Summary of Population Groups in Need of Employment Program Services	45
III.	ASSESSING JOB OPPORTUNITIES	47
	Long-Term Changes in the Industrial Structure	49
	Seasonality in the Maine Economy	62
	Wages and Labor Turnover of Production Workers in Maine Manufacturing Industries	65
	Leading Industries for Job Opportunities	69
	General Occupational Employment Trends	78
	Occupations for Potential Training and Placement	80
IV.	EMPLOYMENT AND TRAINING PROGRAM PLANNING RECOMMENDATIONS	87
V.	EXPLANATION OF METHODOLOGIES AND PROCEDURES	91
VI.	GLOSSARY OF TERMS	95
	APPENDIX A: SOURCES OF DATA CONTAINED IN THE MAINE OCCUPATION-INDICATOR MATRIX	107
	APPENDIX B: SOURCES OF LABOR MARKET INFORMATION APPLICABLE FOR EMPLOYMENT AND TRAINING PROGRAM PLANNING	117

LIST OF TABLES

TABLE		PAGE
1.	RESIDENT POPULATION OF THE UNITED STATES AND THE NEW ENGLAND STATES, 1970 AND 1980	8
2.	POPULATION OF MAINE AND MAINE COUNTIES, 1970 AND 1980	9
3.	MAINE POPULATION BY AGE AND SEX, 1970 AND 1980	13
4.	PERCENT DISTRIBUTION OF THE MAINE POPULATION, BY AGE, BY COUNTY, 1980	14
5.	CIVILIAN LABOR FORCE, UNEMPLOYMENT, AND RESIDENT EMPLOYMENT IN MAINE, ANNUAL AVERAGE, 1976-1981	17
6.	MAINE POPULATION, LABOR FORCE, LABOR FORCE PARTICIPATION RATE, UNEMPLOYMENT, AND UNEMPLOYMENT RATE, BY AGE AND SEX, 1970 AND PROJECTIONS FOR FISCAL YEAR 1983	18
7.	CIVILIAN LABOR FORCE, UNEMPLOYMENT, AND RESIDENT EMPLOYMENT IN MAINE BY COUNTY, ANNUAL AVERAGE, 1981	19
8.	SCHOOL ENROLLMENT IN MAINE BY COUNTY AND GRADE, 1980-1981 SCHOOL YEAR	24
9.	MAINE PUBLIC SECONDARY SCHOOL ENROLLMENT, DROPOUTS, AND DROPOUT RATES, BY COUNTY, 1977-1981	25
10.	1981 ENROLLMENT IN POST-HIGH SCHOOL EDUCATION BY PUBLIC AND PRIVATE MAINE HIGH SCHOOL GRADUATES	26
11.	PER CAPITA PERSONAL INCOME FOR THE UNITED STATES, NEW ENGLAND, MAINE, AND MAINE COUNTIES, 1970 AND 1980	31
12.	MEDIAN HOUSEHOLD EFFECTIVE BUYING INCOME IN MAINE, BY COUNTY, 1975 AND 1980	32
13.	PERCENT DISTRIBUTION OF MAINE HOUSEHOLDS BY EFFECTIVE BUYING INCOME, BY COUNTY, 1980	33
14.	AVERAGE WEEKLY WAGES PAID IN COVERED EMPLOYMENT IN MAINE BY INDUSTRY, 1975 AND 1980	34
15.	AVERAGE WEEKLY WAGES PAID IN COVERED EMPLOYMENT IN MAINE BY COUNTY, 1970 AND 1980	35
16.	INCOME IN MAINE COUNTIES AS A PERCENT OF STATEWIDE INCOME FOR SELECTED INCOME MEASURES, 1980	36
17.	INCOME ASSISTANCE PROGRAMS IN MAINE BY COUNTY, 1981 AVERAGES	37

TABLE		PAGE
18.	SELECTED COMPONENTS OF PERSONAL INCOME IN MAINE, 1970 AND 1980	38
19.	PERCENT DISTRIBUTION OF SELECTED CHARACTERISTICS OF ACTIVE APPLICANTS IN MAINE, SEPTEMBER 1981	43
20.	PERCENT DISTRIBUTION OF THE CHARACTERISTICS OF THE UNEMPLOYED IN MAINE, JANUARY 1982	44
21.	NONFARM WAGE AND SALARY EMPLOYMENT IN MAINE BY INDUSTRY, 1976 AND 1981	52
22.	ANNUAL AVERAGE WAGE AND SALARY EMPLOYMENT IN NONFARM INDUSTRIES IN MAINE, 1972-1981	53
23.	PERCENT DISTRIBUTION OF ANNUAL AVERAGE WAGE AND SALARY EMPLOYMENT FOR NONFARM INDUSTRIES IN MAINE, 1972-1981	54
24.	CHARACTERISTICS OF NONFARM INDUSTRIES IN MAINE, 1981	55
25.	GOVERNMENT EMPLOYMENT IN MAINE, 1976 AND 1981	57
26.	REVISED ESTIMATES OF NONFARM EMPLOYMENT IN MAINE 1981	64
27.	ANNUAL AVERAGE WORKWEEK AND HOURLY AND WEEKLY EARNINGS OF PRODUCTION WORKERS EMPLOYED IN MANUFACTURING INDUSTRIES IN MAINE, 1976-1981	66
28.	LABOR TURNOVER RATES OF PRODUCTION WORKERS IN MAINE MANUFACTURING INDUSTRIES, 1980 AND 1981	67
29.	MAINE INDUSTRY-INDICATOR MATRIX	77
30.	MAINE OCCUPATION-INDICATOR MATRIX, 1980-1985	84

LIST OF FIGURES

FIGURE		PAGE
1.	POPULATION OF MAINE COUNTIES, 1970 AND 1980.....	10
2.	ANNUAL AVERAGE UNEMPLOYMENT RATES IN MAINE, 1976-1981.....	20
3.	PROJECTED LABOR FORCE PARTICIPATION RATES BY AGE AND SEX, MAINE, FISCAL YEAR 1983.....	21
4.	PROJECTED UNEMPLOYMENT RATES BY AGE AND SEX, MAINE, FISCAL YEAR 1983.....	22
5.	SECONDARY SCHOOL DROPOUTS AS A PERCENT OF SECONDARY SCHOOL ENROLLMENT, MAINE AND MAINE COUNTIES, FOUR-YEAR AVERAGE, 1977-1981.....	27
6.	PERCENTAGE CHANGE FROM PREVIOUS YEAR IN MAINE AVERAGE WEEKLY WAGES AND U.S. CONSUMER PRICE INDEX, ANNUAL AVERAGES, 1976-1981.....	39
7.	PERCENT OF COUNTY POPULATIONS RECEIVING FOOD STAMPS, MAINE, 1981.....	40
8.	PERCENT OF COUNTY POPULATIONS RECEIVING AID TO FAMILIES WITH DEPENDENT CHILDREN (AFDC), MAINE, 1981.....	40
9.	DISTRIBUTION OF NONFARM WAGE AND SALARY EMPLOYMENT, MAINE, 1972-1981.....	58
10.	EMPLOYMENT IN MANUFACTURING INDUSTRIES, MAINE, ANNUAL AVERAGES, 1981.....	59
11.	EMPLOYMENT IN NONMANUFACTURING INDUSTRIES, MAINE, ANNUAL AVERAGES, 1976 AND 1981.....	60
12.	NONMANUFACTURING EMPLOYMENT BY MAJOR INDUSTRY DIVISION, MAINE, 1972-1981.....	61
13.	ANNUAL AVERAGE HOURLY EARNINGS OF PRODUCTION WORKERS IN MAINE MANUFACTURING INDUSTRIES, 1976-1981.....	68

SECTION I

INTRODUCTION

The key to successful program planning and development is information. Federal agencies may provide sources of funding, and state and local governments may provide the means of program delivery, but the nature and the quality of those programs are only as good as the information upon which they stand. Any program that seeks to effectively utilize resources must quantify the realities of local economic and social conditions.

Employment and training programs prepare people for jobs and a productive role in society. An effective employment and training system relies on accurate identification of occupations now in demand and, even more important, skills which will be in demand in the future.

As we continue in the first years of a new decade, and look back on the social and economic upheavals of the 1970s, it is fundamental that employment and training programs be designed with an understanding of these changes. Because such changes are unprecedented in recent American experience, accurate projections of demand and supply, based on historical relationships, have become difficult to make. Instead of point forecasting, economists now talk in terms of possible scenarios. Thus, as a caveat to users of the report, the numbers contained in this planning document should be taken as evidence of relative conditions, not as absolute numerical truth.

The impact of employment and training programs during Fiscal Year (FY) 1983 (October 1, 1982-September 30, 1983) will be determined to a large extent by how the national economy responds to the policies of the current administration. Although most economists expect unemployment to peak during 1982 and decline during 1983, there is considerable disagreement on the timing of these events. While Maine has fared relatively well during the current recession, in recent months some of the stronger manufacturing industries have started to show the effects of continued high interest rates and sluggish demand. If the recession lasts beyond the end of 1982, successful penetration of the private sector will be most difficult during FY 1983.

In the context of a market economy, job creation depends on investment, and these investment decisions are influenced by a myriad of factors which are beyond the control of employment and training planners. These factors may include interest rates, inflation rates, productivity levels, energy costs, and profit levels. Although planners cannot control these factors, they can recognize the changes which they portend. It is believed that the data contained in this report, the fourth publication of Annual Planning Information, Maine Statewide (API), will aid in that recognition.

The information contained within the API is not exhaustive. Questions raised by the report would certainly warrant more detailed labor market analysis to ensure that investments in employment and training programs herald socially optimal returns. Labor market information researchers and planners may wish to complement the information contained in this document with other information available through the Division of Economic Analysis and Research.

For further information contact:

Dana Evans
Maine Department of Labor
Bureau of Employment Security
Division of Economic Analysis and Research
20 Union Street
Augusta, Maine 04330
(207) 289-2271

SECTION II

IDENTIFICATION OF POPULATION GROUPS IN NEED OF EMPLOYMENT PROGRAM SERVICES

THE MAINE POPULATION, 1970-1980

Throughout much of this century Maine's population increased at a slower rate than the national population. However, this trend was reversed between 1970 and 1980. According to the U.S. Department of Commerce, Bureau of the Census, the population in Maine increased from 993,663 in 1970 to 1,125,027 in 1980. This increase of 13.2 percent was greater than the increase of 11.4 percent for the United States and 4.2 percent for the New England States. The populations of Vermont and New Hampshire increased 14.8 percent and 24.8 percent, respectively. While these states recorded a greater rate of growth than Maine, the southern New England states recorded little population growth. The population of Rhode Island declined slightly (-0.3 percent) while Massachusetts and Connecticut recorded increases of 0.8 percent and 2.5 percent, respectively.

Maine's greatest population growth occurred along the coast. The populations of Franklin, Hancock, Lincoln, Sagadahoc, Waldo, and York counties all increased by more than 20 percent. With the exception of Franklin, all of these counties are located along the coast. In addition to being primarily a coastal phenomenon, the population increase was greatest in smaller towns. Many larger municipalities, including Auburn, Augusta, Bangor, Biddeford, Brewer, Caribou, Eastport, Lewiston, Old Town, Portland, Presque Isle, Rockland, South Portland, and Waterville, lost population during the seventies. Collectively, these cities and towns accounted for 30 percent of the State's 1970 population and 25.5 percent of the 1980 population. The population decrease recorded by the larger municipalities does not imply that they became less important in terms of being trade and work centers, as many of the neighboring towns experienced very rapid growth.

TABLE 1

RESIDENT POPULATION OF THE UNITED STATES
AND THE NEW ENGLAND STATES
1970 AND 1980
(In thousands)

Area 1/	Population		Change, 1970 to 1980	
	1970	1980	Net	Percent
United States.....	203,302	226,505	23,203	11.4%
New England.....	11,847	12,349	502	4.2
Connecticut.....	3,032	3,108	76	2.5
Maine.....	994	1,125	131	13.2
Massachusetts.....	5,689	5,737	48	0.8
New Hampshire.....	738	921	183	24.8
Rhode Island.....	950	947	-3	-0.3
Vermont.....	445	511	66	14.8

1/ Estimates may not add due to rounding.

Source: U.S. Department of Commerce, Bureau of the Census, Regional Office, Boston, April 1981.

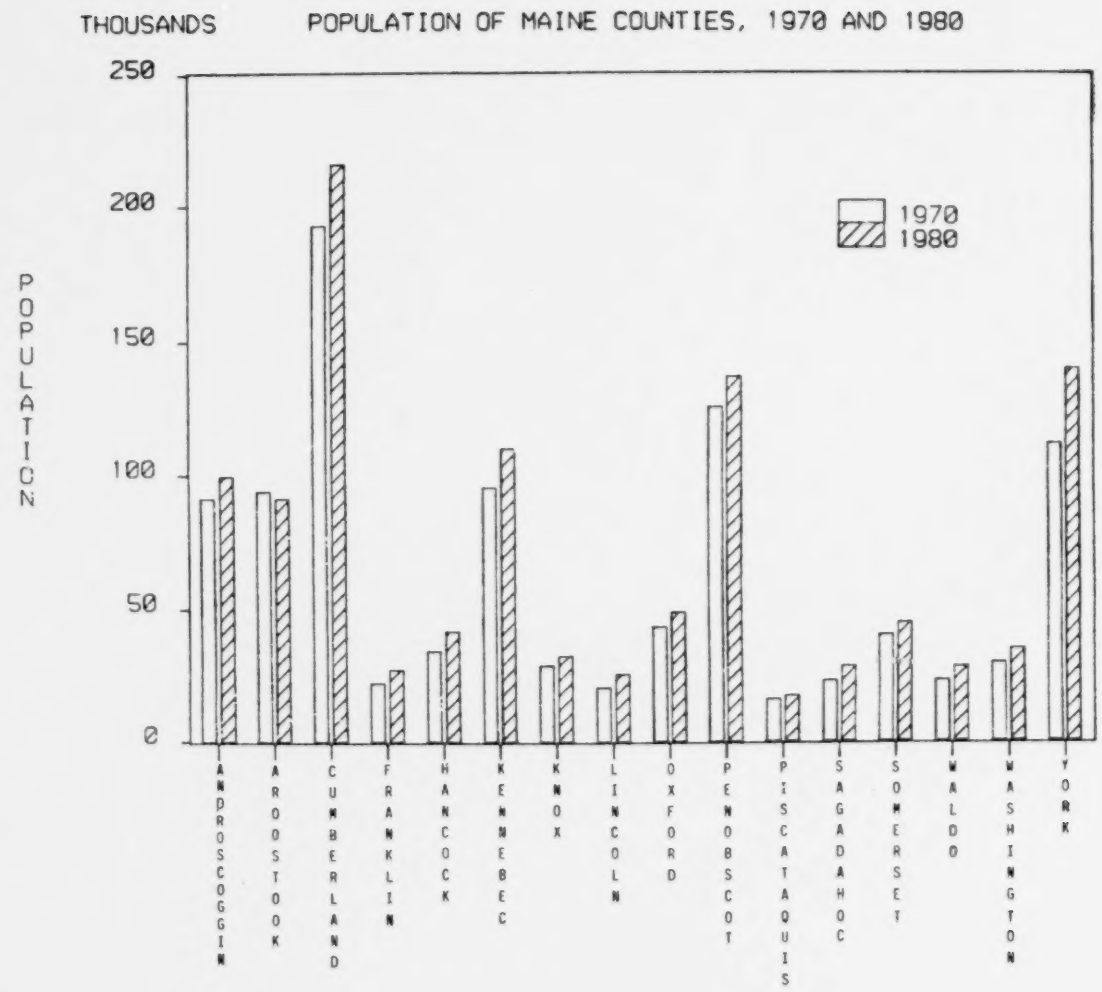
TABLE 2

POPULATION OF MAINE AND MAINE COUNTIES
1970 AND 1980

Area	Population		Percent Change 1970-1980
	1970	1980	
Maine	993,663	1,125,027	13.2%
Counties			
Androscoggin	91,279	99,657	9.2
Aroostook	94,078	91,331	- 2.9
Cumberland	192,528	215,789	12.1
Franklin	22,444	27,447	22.3
Hancock	34,590	41,781	20.8
Kennebec	95,247	109,889	15.4
Knox	29,013	32,941	13.5
Lincoln	20,537	25,691	25.1
Oxford	43,457	48,968	12.7
Penobscot	125,393	137,015	9.3
Piscataquis	16,285	17,634	8.3
Sagadahoc	23,452	28,795	22.8
Somerset	40,597	45,046	11.0
Waldo	23,328	28,414	21.8
Washington	29,859	34,963	17.1
York	111,576	139,666	25.2

Source: 1980 Census of Population and Housing, U.S. Department of Commerce, Bureau of the Census. The 1980 figures in this publication were revised by the Bureau of the Census.

FIGURE 1


THOUSANDS
POPULATION OF MAINE COUNTIES, 1970 AND 1980
250
200
150
100
50
0
POPULATION
1970
1980
ANDROSCOGGIN
AROOSTOOK
CUMBERLAND
FRANKLIN
HANCOCK
KENNEBEC
KNOX
LINCOLN
OXFORD
PENOBSCOT
PISCATAQUIS
SAGADAHOC
SOMERSET
WALDO
WASHINGTON
YORK

DEMOGRAPHIC CHARACTERISTICS OF THE MAINE POPULATION, 1970 AND 1980

Maine's population recorded significant growth and change between 1970 and 1980. While the overall population increased by 13.2 percent, the male population increased by 12.9 percent and the female population increased by 13.5 percent. However, these slightly different growth rates resulted in very little change in the sexual composition of the population. Males accounted for 48.7 percent of the 1970 population and 48.6 percent of the 1980 population. The percentage of the population which was female increased from 51.3 percent to 51.4 percent.

Although there was little change in the sexual composition of Maine's population between 1970 and 1980, there were substantial changes in the age distribution of the population. In both Maine and the nation the birthrate declined substantially starting in the 1960s. This decline is reflected in the age distribution of Maine's 1980 population. The population four years old and younger decreased from 84,511 in 1970 to 78,531 in 1980. The number of persons between 5 and 17 years of age fell from 261,986 to 242,919. Altogether, the population 17 years old or younger fell from 34.9 percent of the total population in 1970 to 28.6 percent in 1980. These population figures indicate that within the next decade there will be fewer young people entering the Maine labor force. However, the major impact of the declining youth population is still several years away.

The number of individuals in their prime working years, 18 to 64, increased substantially between 1970 and 1980. The population aged 18 to 44 years increased from 328,232 in 1970 to 443,122 in 1980, or from 33 percent to 39.4 percent of the total population. The number of 45 to 64 year olds increased from 204,342 in 1970 to 219,494 in 1980. However, this age group declined slightly as a percentage of the total population. Overall, between 1970 and 1980 there was an increase of 130,042 people in the population between 18 and 64 years of age. This group includes those in their prime working years. Coupled with the increased labor force participation of females during the 1970s, this population increase put pressure on the State's economy to create jobs for an expanding labor force. This will be discussed in greater detail in a subsequent section.

The population of those 65 years old and over increased from 114,592 in 1970 to 140,961 in 1980. As a percentage of the total population, those 65 and over increased from 11.5 percent to 12.5 percent. Reasons for the increase in the size of this oldest age group include improved medical care and the retirement of some people to Maine to enjoy the relatively slow-paced life. Although the labor force participation rate for this age group is relatively low, some older workers encounter special problems successfully participating in the labor market. In many instances employers place an emphasis on youth.

As discussed earlier, females comprise a slight majority of the population in Maine. However, among those 65 and older females account for a

substantial majority. In this older age group females outnumbered males 84,709 to 56,252 in 1980. Females apparently enjoy greater longevity than males.

The age distribution of the population varies by county. Counties with relatively fewer young people are Hancock, Knox, and Cumberland. The populations of Aroostook, Somerset, Sagadahoc, and Waldo counties contain relatively more young people. Lincoln, Knox, and Hancock counties include high concentrations of people 65 years old and older. Statewide, 58.9 percent of the population in 1980 was in the prime working age group of 18 to 64 years. This varied from a low of 56.3 percent in Somerset County to a high of 61.9 percent in Penobscot County.

TABLE 3

MAINE POPULATION BY AGE AND SEX, 1970 AND 1980

Sex/Age Group	1970		1980	
	Number	Percent	Number	Percent
TOTAL.....	993,663	100.0%	1,125,027	100.0%
0- 4.....	84,511	8.5	78,531	7.0
5-17.....	261,986	26.4	242,919	21.6
18-44.....	328,232	33.0	443,122	39.4
45-64.....	204,342	20.6	219,494	19.5
65 and over.....	114,592	11.5	140,961	12.5
MALE, TOTAL...	484,073	100.0%	546,427	100.0%
0- 4.....	43,005	8.9	40,186	7.3
5-17.....	133,322	27.5	124,514	22.8
18-44.....	161,988	33.5	220,593	40.4
45-64.....	98,105	20.3	104,882	19.2
65 and over.....	47,653	9.8	56,252	10.3
FEMALE, TOTAL.	509,590	100.0%	578,600	100.0%
0- 4.....	41,506	8.1	38,345	6.6
5-17.....	128,664	25.3	118,405	20.5
18-44.....	166,244	32.6	222,529	38.5
45-64.....	106,237	20.9	114,612	19.8
65 and over.....	66,939	13.1	84,709	14.6

Source: U. S. Department of Commerce, Bureau of the Census.

TABLE 4

PERCENT DISTRIBUTION OF THE MAINE POPULATION, BY AGE
BY COUNTY, 1980

County	Age Cohort				
	0-4 Years	5-17 Years	18-44 Years	45-64 Years	65 and Older
Maine	7.0%	21.6%	39.4%	19.5%	12.5%
Androscoggin	7.2	22.0	38.5	19.5	12.8
Aroostook	7.9	23.7	39.8	18.2	10.4
Cumberland	6.4	20.4	40.9	19.6	12.7
Franklin	6.8	22.5	39.9	18.9	11.9
Hancock	6.2	20.1	38.0	20.3	15.4
Kennebec	7.0	21.7	39.3	19.8	12.2
Knox	6.2	20.3	36.4	21.1	16.0
Lincoln	6.8	20.8	35.8	20.8	15.8
Oxford	6.8	22.3	35.5	21.4	14.0
Penobscot	6.8	21.0	43.5	18.4	10.3
Piscataquis	7.2	22.0	35.8	20.6	14.4
Sagadahoc	7.6	22.5	41.1	17.4	11.4
Somerset	7.4	23.7	36.5	19.8	12.6
Waldo	7.8	22.8	38.3	19.3	11.8
Washington	7.8	21.2	35.8	20.7	14.5
York	7.1	21.8	38.8	19.6	12.7

Source: U. S. Department of Commerce, Bureau of the Census.

CHANGES IN MAINE'S LABOR FORCE SINCE 1970

As a previous section detailed, the population in Maine recorded significant growth and change between 1970 and 1980. The civilian labor force also expanded and changed during that period. By 1981 the statewide civilian labor force averaged 509,000, unemployment averaged 37,000, and the resultant unemployment rate was 7.2 percent. Nationally the unemployment rate averaged 7.6 percent during 1981--the first year since 1956 that Maine had an annual average unemployment rate below the national rate. In relative terms, the Maine economy has performed much better during the current recession than it did during the 1974-1975 recession.

The civilian labor force increased from an annual average of 410,300 in 1970 to 507,000 during 1980, or by 23.6 percent. Labor force growth slowed during 1981, increasing by only 2,000 over the previous year. Although exact reasons for the slower growth in the State's labor force during 1981 are not known, there are a number of possible factors including fewer youth entering the labor force, retirement at an earlier age, and an increase in the number of discouraged workers. Discouraged workers are those individuals who, when faced with poor economic conditions, no longer seek employment and thus are not counted in the labor force statistics. National estimates of the number of discouraged workers indicate an increase of over 12 percent from 1980 through 1981.

Several factors contributed to the increase of 23.6 percent in the labor force between 1970 and 1980. The population increased by 13.2 percent during that period. The growth in the working age population was much more dramatic than the gain in total population. The number of 18 to 64 year olds in Maine increased from 532,574 in 1970 to 662,616 in 1980, an increase of 24.4 percent. Obviously a sizable share of the labor force growth can be attributed to an increase in the working age population. In addition, the labor force participation rate has increased since 1970.

According to projections made by the Lawrence Berkeley Laboratory for the U.S. Department of Labor, Maine's labor force participation rate is projected to increase from 56.5 percent in 1970 to 59.2 percent in Fiscal Year (FY) 1983. While the male labor force participation rate is projected to fall from 73.9 percent to 69.1 percent, the participation rate for females is projected to increase from 41.2 percent to 50.5 percent. The labor force participation rate is expected to increase for females of all ages except those 65 years old and older. Increased labor force participation on the part of females has been responsible for a significant segment of the growth in Maine's labor force since 1970. By FY 1983 females are projected to comprise approximately 45.2 percent of Maine's labor force compared to a substantially lower 38.7 percent in 1970. Among the reasons given for the increased labor force participation of women are changing family roles, an increasing divorce rate, a lower birthrate, and the need for additional family income, especially during a period of increasing costs.

As more females have entered Maine's labor force, they have experienced higher rates of unemployment than males. According to Lawrence Berkeley Laboratory projections, females in most age groups will experience a higher rate of unemployment than their male counterparts during FY 1983.

The projected rate of unemployment is also higher for younger workers. Projections indicate FY 1983 unemployment rates of 21 percent for 16-19 year old females and 11.4 percent for 20-24 year old females. The corresponding rates for males are 16.9 percent and 11.9 percent, respectively. Age and sex are clearly indicators of the relative incidence of unemployment.

Besides varying by age and sex, unemployment rates in Maine also vary geographically. During 1981, when the State's unemployment rate was 7.2 percent, county rates ranged from a low of 5.6 percent in Cumberland County to a high of 11.2 percent in Waldo County. In addition to Waldo County, Aroostook, Somerset, and Washington counties all had unemployment rates of 10 percent or higher. Generally speaking, Maine's rural areas tend to record higher rates of unemployment. Maine's most populous counties of Cumberland, Kennebec, Penobscot, and York each had an unemployment rate at or below the statewide average.

TABLE 5

CIVILIAN LABOR FORCE, UNEMPLOYMENT, AND RESIDENT EMPLOYMENT IN MAINE, ANNUAL AVERAGE, 1976-1981

Year	Civilian Labor Force	Resident Employment	Unemployment	
			Number	Rate
1976.....	479,000	437,000	43,000	8.9%
1977.....	478,000	438,000	40,000	8.4
1978.....	483,000	454,000	30,000	6.1
1979.....	499,000	463,000	36,000	7.2
1980.....	507,000	468,000	39,000	7.8
1981.....	509,000	472,000	37,000	7.2

Source: Maine Department of Labor, Bureau of Employment Security, Division of Economic Analysis and Research.

TABLE 6

MAINE POPULATION, LABOR FORCE, LABOR FORCE PARTICIPATION RATE, UNEMPLOYMENT, AND UNEMPLOYMENT RATE, BY AGE AND SEX, 1970 AND PROJECTIONS FOR FISCAL YEAR 1983

Sex/Age Group	Population		Labor Force		Labor Force Participation Rate		Unemployment		Unemployment Rate	
	1970	FY 1983	1970	FY 1983	1970	FY 1983	1970	FY 1983	1970	FY 1983
Male										
16-19	36,382	39,231	15,186	19,104	41.7%	48.7%	1,459	3,224	9.6%	16.9%
20-24	31,910	49,649	25,118	38,089	78.7	76.7	1,521	4,519	6.1	11.9
25-34	51,539	94,019	48,897	83,069	94.9	88.4	1,657	6,549	3.4	7.9
35-44	51,793	68,644	49,155	60,167	94.9	87.7	1,134	2,486	2.3	4.1
45-64	97,678	103,075	84,575	76,273	86.6	74.0	2,287	2,851	2.7	3.7
65 and over	47,635	59,759	11,142	9,677	23.4	16.2	370	226	3.3	2.3
Total	316,937	414,377	234,073	286,379	73.9	69.1	8,428	19,855	3.6	6.9
Female										
16-19	36,523	37,886	12,546	18,871	34.4	49.8	1,421	3,966	11.3	21.0
20-24	37,486	47,724	19,723	29,952	52.6	62.8	1,308	3,404	6.6	11.4
25-34	56,013	93,591	24,133	62,354	43.1	66.6	1,196	5,115	5.0	8.2
35-44	55,348	75,019	29,188	54,726	52.7	72.9	1,184	2,827	4.1	5.2
45-64	106,222	117,151	54,566	61,974	51.4	52.9	1,933	2,681	3.5	4.3
65 and over	66,935	96,764	7,485	8,445	11.2	8.7	394	309	5.3	3.7
Total	358,527	468,135	147,641	236,322	41.2	50.5	7,436	18,302	5.0	7.7
Total, Male and Female										
16-19	72,905	77,117	27,732	37,975	38.0	49.2	2,880	7,190	10.4	18.9
20-24	69,396	97,373	44,841	68,041	64.6	69.9	2,829	7,923	6.3	11.6
25-34	107,552	187,610	73,030	145,423	67.9	77.5	2,853	11,664	3.9	8.0
35-44	107,141	143,663	78,343	114,893	73.1	80.0	2,318	5,313	3.0	4.6
45-64	203,900	220,226	139,141	138,247	68.2	62.8	4,220	5,532	3.0	4.0
65 and over	114,570	156,523	18,627	18,122	16.3	11.6	764	535	4.1	3.0
Total	675,464	882,512	381,714	522,701	56.5	59.2	15,864	38,157	4.2	7.3

Source: The Regional Office of the Employment and Training Administration provided the Division of Economic Analysis and Research with special tabulations of population and labor force projections from the Lawrence Berkeley Laboratory. The projected figures were developed for planning purposes only and should not be considered as official projections.

TABLE 7

CIVILIAN LABOR FORCE, UNEMPLOYMENT, AND RESIDENT EMPLOYMENT IN MAINE
BY COUNTY, ANNUAL AVERAGE, 1981

Area	Civilian Labor Force	Resident Employment	Unemployment	Unemployment Rate
Maine 1/.....	509,000	472,000	37,000	7.2%
Androscoggin.....	47,780	43,910	3,870	8.1
Aroostook.....	37,180	33,430	3,750	10.1
Cumberland.....	101,580	95,940	5,640	5.6
Franklin.....	12,630	11,710	920	7.3
Hancock.....	19,660	18,270	1,390	7.1
Kennebec.....	49,740	46,140	3,600	7.2
Knox.....	14,830	13,680	1,150	7.8
Lincoln.....	10,140	9,410	730	7.2
Oxford.....	21,220	19,440	1,780	8.4
Penobscot.....	65,610	61,220	4,390	6.7
Piscataquis.....	7,960	7,490	470	5.9
Sagadahoc.....	12,980	12,240	740	5.7
Somerset.....	20,330	18,300	2,030	10.0
Waldo.....	10,390	9,230	1,160	11.2
Washington.....	15,230	13,620	1,610	10.6
York.....	61,760	57,980	3,780	6.1

1/ County estimates do not add up to State estimates due to rounding.

Source: Maine Department of Labor, Bureau of Employment Security, Division of Economic Analysis and Research.

FIGURE 2

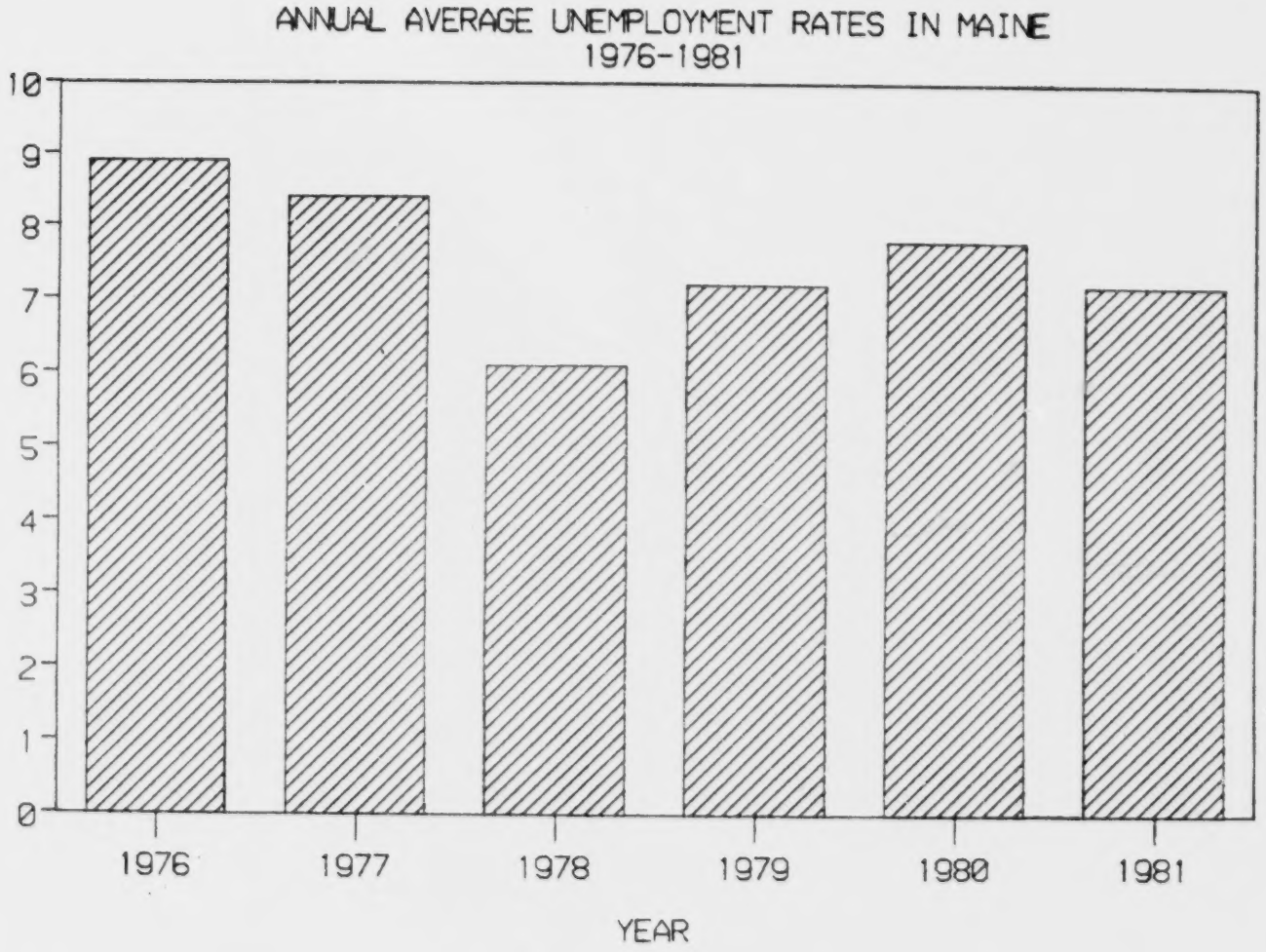

ANNUAL AVERAGE UNEMPLOYMENT RATES IN MAINE
1976-1981
10
9
8
7
6
5
4
3
2
1
0
RATE
1976
1977
1978
1979
1980
1981
YEAR

FIGURE 3

PROJECTED LABOR FORCE PARTICIPATION RATES BY AGE AND SEX
MAINE, FISCAL YEAR 1983

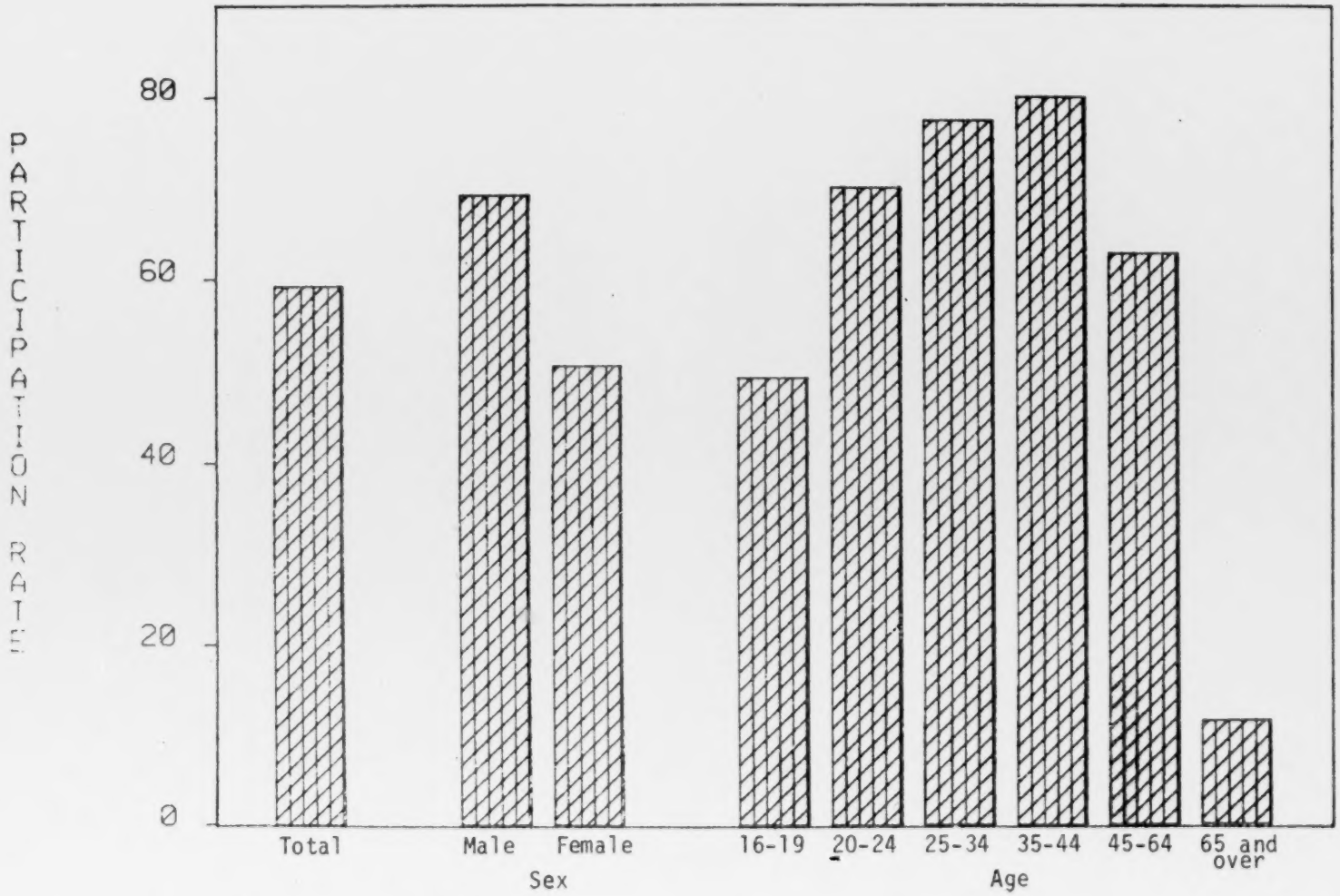
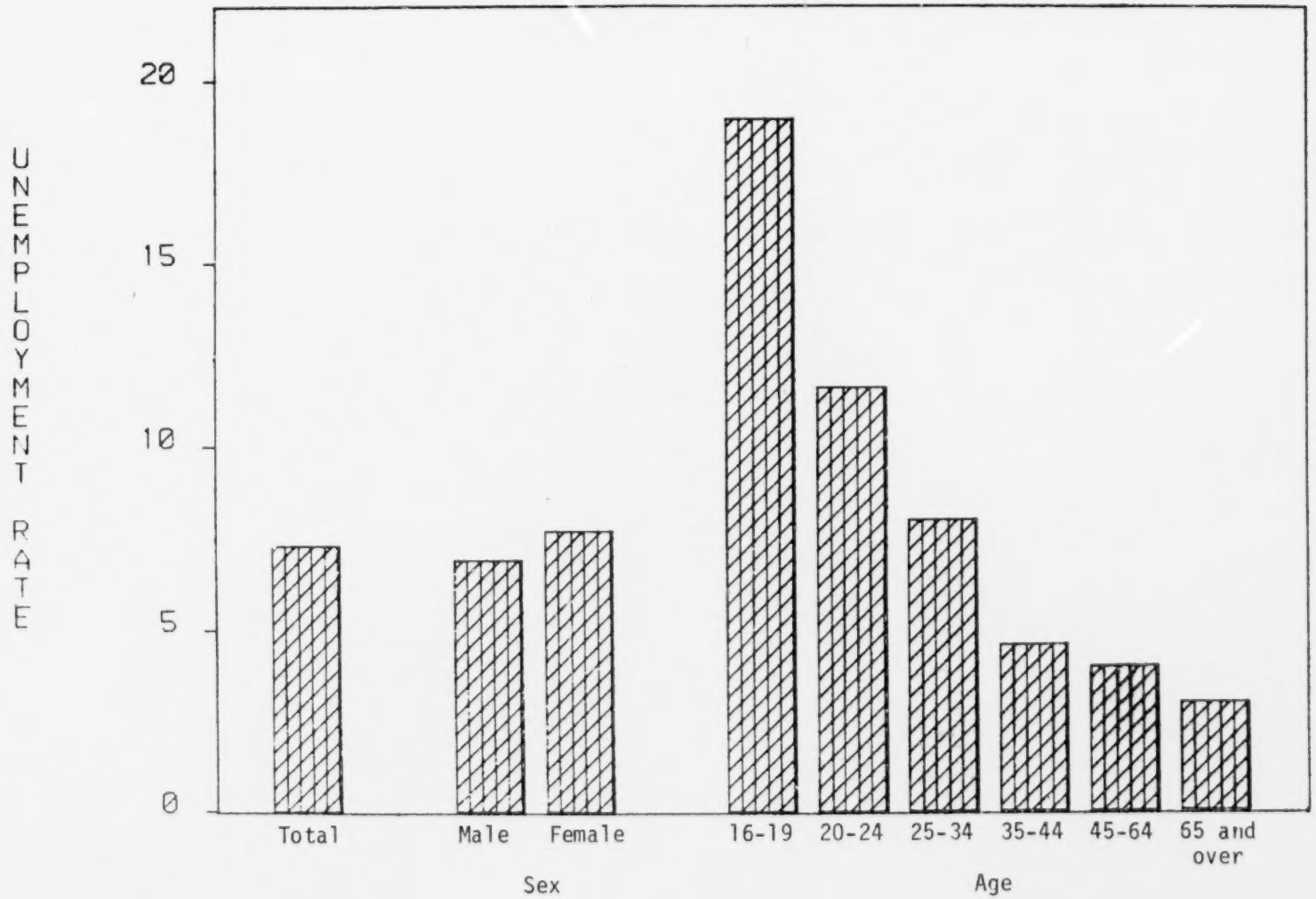


FIGURE 4

PROJECTED UNEMPLOYMENT RATES BY AGE AND SEX
MAINE, FISCAL YEAR 1983



SCHOOL ENROLLMENTS AND DROPOUTS

Total public and private elementary and secondary school enrollment in Maine was 240,112 during the 1980-1981 school year. Approximately 92.7 percent of these students attended a public school. Enrollment by grade varied from a low of 16,340 for grade 2 to a high of 19,969 for grade 10. Due to the declining youth population, elementary grade enrollments are generally lower than secondary grade enrollments. The difference would be even more apparent if the secondary enrollments had not already been decreased by dropouts.

Between 1977 and 1981, Maine's annual average secondary school dropout rate varied from 4.2 percent to 4.7 percent. It averaged 4.4 percent for those four school years. During this period there was an average of 3,186 secondary school dropouts each year. Considering the importance of a high school education for successful labor market participation, it can be expected that many of these dropouts will encounter severe problems finding gainful employment. While all of these dropouts will not enter the labor force, those who do will pose a special challenge for employment and training programs.

Secondary dropout rates exhibit a considerable amount of variation by county. Counties with an average dropout rate above the statewide average for the 1977-1981 period were Androscoggin, Cumberland, Hancock, Oxford, Piscataquis, Sagadahoc, Washington, and York. There appear to be no clear factors explaining why certain counties experience higher dropout rates. High rates were recorded in both urban and rural counties and in both high income and low income counties. Washington County recorded the highest dropout rate, averaging 7.2 percent between 1977 and 1981.

Of Maine's 1981 public high school graduates, 7,179 enrolled in some form of post-secondary education. Approximately 74.4 percent attended a school in Maine. While a majority staying in Maine attended a college or university, significant numbers enrolled in a more vocationally-oriented program. Specifically, 2.2 percent attended nursing schools; 24.2 percent matriculated at a vocational, commercial, or technical school; 63.4 percent enrolled at a college or university; 8.5 percent attended a junior college; and 1.7 percent pursued a post-graduate high school course.

Private high school graduates attended out-of-state schools in relatively greater numbers (51.7 percent versus 25.6 percent for public school graduates). This may reflect the fact that many private high school graduates boarded at a Maine high school while coming from another state. About 76.5 percent of the private school graduates attended a college or university. This was significantly higher than the 63.4 percent figure for public school graduates.

TABLE 8

SCHOOL ENROLLMENT IN MAINE BY COUNTY AND GRADE, 1980-1981 SCHOOL YEAR

COUNTY	UNGR ELEM	SPEC ELEM	PRE-KDGN	KDGN	GRADE 1	GRADE 2	GRADE 3	GRADE 4	GRADE 5	GRADE 6	GRADE 7	GRADE 8	GRADE 9	GRADE 10	GRADE 11	GRADE 12	SPEC SEC	P.G.	TOTAL
									PUBLIC SCHOOLS										
Androscoggin....	15	75	0	1,347	1,346	1,313	1,363	1,469	1,454	1,416	1,470	1,541	1,694	1,543	1,508	1,346	69	2	18,971
Aroostook.....	0	163	7	1,439	1,432	1,435	1,493	1,556	1,579	1,562	1,496	1,695	1,743	1,743	1,746	1,534	92	1	20,716
Cumberland.....	18	241	20	2,639	2,707	2,702	2,965	3,282	3,182	3,131	2,892	2,911	3,397	3,484	3,296	3,174	30	28	40,099
Franklin.....	0	25	0	409	423	375	418	458	454	430	442	460	469	514	513	457	14	4	5,865
Hancock.....	0	45	0	504	529	572	598	659	685	659	611	688	601	588	587	562	10	2	7,900
Kennebec.....	2	61	0	1,405	1,452	1,413	1,510	1,614	1,604	1,586	1,661	1,648	1,702	1,663	1,564	1,530	26	2	20,443
Knox.....	0	9	0	434	485	459	490	565	510	516	459	481	436	434	439	369	0	1	6,087
Lincoln.....	0	11	0	362	348	371	355	446	403	419	431	427	410	386	341	314	0	0	5,024
Oxford.....	0	108	42	642	686	663	694	764	844	827	852	925	918	921	882	826	32	0	10,626
Penobscot.....	0	255	17	1,861	1,920	1,920	1,971	2,178	2,019	2,095	2,033	2,231	2,243	2,443	2,288	2,150	111	7	27,742
Piscataquis.....	0	7	0	316	282	270	309	313	271	358	309	335	235	219	233	206	0	1	3,664
Sagadahoc.....	15	7	0	412	401	429	493	493	514	471	528	485	509	496	529	476	0	3	6,261
Somerset.....	0	48	0	710	704	688	804	825	868	812	859	967	898	781	709	664	4	0	10,341
Waldo.....	0	20	0	412	411	465	458	471	440	483	428	487	437	421	347	366	18	0	5,664
Washington.....	2	47	0	523	570	506	551	565	576	576	578	561	544	459	388	407	1	7	6,861
York.....	99	240	12	1,857	1,968	1,872	1,999	2,263	2,125	2,089	2,181	2,220	1,865	1,870	1,786	1,664	122	1	26,233
Total, Public Schools.....	151	1,362	98	15,272	15,664	15,453	16,471	17,921	17,528	17,430	17,230	18,062	18,101	17,965	17,156	16,045	529	59	222,497
Total, Private Schools.....	345	349	256	881	882	887	924	1,002	951	917	924	852	1,764	2,004	1,858	1,963	505	351	17,615
State Total.....	496	1,711	354	16,153	16,546	16,340	17,395	18,923	18,479	18,347	18,154	18,914	19,865	19,969	19,014	18,008	1,034	410	240,112

Source: "1980-1981 Maine Educational Facts," Division of Management Information, Maine Department of Educational and Cultural Services.

TABLE 9

MAINE PUBLIC SECONDARY SCHOOL ENROLLMENT, DROPOUTS, AND DROPOUT RATES, BY COUNTY, 1977-1981

County	1977-1978			1978-1979			1979-1980			1980-1981			Average 1/		
	Secondary Enrollment	Drop-outs	Rate	Secondary Enrollment	Drop-outs	Rate	Secondary Enrollment	Drop-outs	Rate	Secondary Enrollment	Drop-outs	Rate	Secondary Enrollment	Drop-outs	Rate
TOTAL.....	73,996	3,466	4.7%	73,395	3,365	4.6%	71,853	2,988	4.2%	69,920	2,924	4.2%	72,291	3,186	4.4%
Androscoggin.....	5,972	274	4.6	5,929	283	4.8	5,805	262	4.5	5,797	328	5.7	5,876	287	4.9
Aroostook.....	7,577	251	3.3	7,474	270	3.6	7,105	227	3.2	6,855	218	3.2	7,253	242	3.3
Cumberland.....	13,613	625	4.6	13,260	777	5.9	13,059	551	4.2	12,365	684	5.5	13,074	659	5.0
Franklin.....	1,976	58	2.9	2,028	67	3.3	2,033	69	3.4	1,972	73	3.7	2,002	67	3.3
Hancock.....	2,571	150	5.8	2,572	86	3.3	2,523	131	5.2	2,397	91	3.8	2,516	115	4.6
Kennebec.....	7,202	334	4.6	7,169	276	3.8	6,960	261	3.8	6,928	266	3.8	7,065	284	4.0
Knox.....	1,804	64	3.5	1,771	61	3.4	1,753	52	3.0	1,699	57	3.4	1,757	59	3.4
Lincoln.....	1,413	76	5.4	1,429	37	2.6	1,442	23	1.6	1,462	35	2.4	1,436	43	3.0
Oxford.....	3,739	231	6.2	3,784	161	4.3	3,667	157	4.3	3,542	129	3.6	3,683	169	4.6
Penobscot.....	9,885	459	4.6	9,791	465	4.7	9,519	400	4.2	9,288	355	3.8	9,621	420	4.4
Piscataquis.....	982	37	3.8	996	56	5.6	963	51	5.3	903	47	5.2	961	48	5.0
Sagadahoc.....	2,202	124	5.6	2,287	107	4.7	2,053	133	6.5	2,002	85	4.2	2,136	112	5.2
Somerset.....	3,173	109	3.4	3,101	96	3.1	3,123	90	2.9	3,034	90	3.0	3,108	96	3.1
Waldo.....	1,682	83	4.9	1,650	80	4.8	1,612	64	4.0	1,574	54	3.4	1,629	70	4.3
Washington.....	1,944	155	8.0	1,917	143	7.5	1,867	121	6.5	1,795	122	6.8	1,881	135	7.2
York.....	8,261	436	5.3	8,237	400	4.9	8,369	396	4.7	8,307	290	3.5	8,293	380	4.6

1/ Four-year average, 1977-1981.

Source: "1980-1981 Maine Educational Facts," Division of Management Information, Maine Department of Educational and Cultural Services.

TABLE 10

1981 MAINE HIGH SCHOOL GRADUATES ENROLLED IN POST-HIGH SCHOOL EDUCATION PROGRAMS

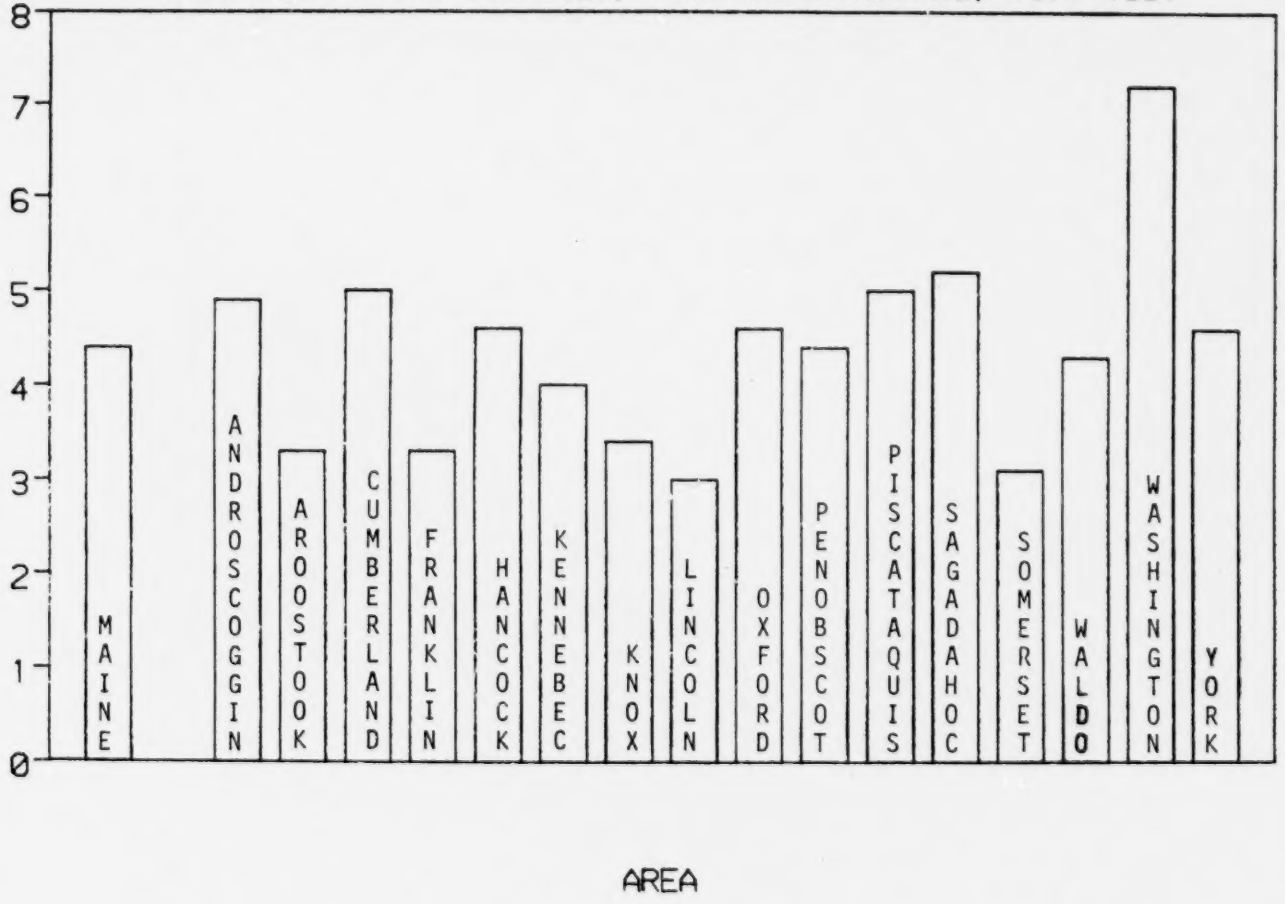
Type of Post-High School Program	Attending in Maine	Attending Outside Maine	Total	Percent of Continuing Students
Public High School Graduates				
Post-graduate High School Course..	106	13	119	1.7%
Junior College.....	401	212	613	8.5
College or University.....	3,206	1,344	4,550	63.4
Vocational, Commercial, or Technical.....	1,490	247	1,737	24.2
Nursing School.....	141	19	160	2.2
Total 1/.....	5,344	1,835	7,179	100.0%
Private High School Graduates				
Post-graduate High School Course..	18	7	25	1.9%
Junior College.....	34	52	86	6.7
College or University.....	428	561	989	76.5
Vocational, Commercial, or Technical.....	131	45	176	13.6
Nursing School.....	13	4	17	1.3
Total 1/.....	624	669	1,293	100.0%

1/ Of 15,554 graduates of public high schools in June 1981, 46.2% (7,179) enrolled in some type of post-high school education. Of the 1,841 graduates of private high schools, 70.0% (1,293) enrolled in some type of post-high school education.

Source: "1980-1981 Maine Educational Facts," Division of Management Information, Maine Department of Educational and Cultural Services.

FIGURE 5

SECONDARY SCHOOL DROPOUTS AS A PERCENT OF SECONDARY SCHOOL ENROLLMENT
MAINE AND MAINE COUNTIES, FOUR-YEAR AVERAGE, 1977-1981



INCOME AND INCOME ASSISTANCE PROGRAMS

Per capita personal income in Maine was $7,868 during 1980. During that same year per capita personal income was $10,086 for New England and $9,511 for the United States. Maine clearly lags behind New England and the United States in this measure of wealth. However, between 1970 and 1980 Maine's per capita personal income increased 142.1 percent while the New England figure increased 137.6 percent. While this is not an appreciable difference, it does show that the gap between Maine and New England is narrowing rather than widening.

During 1980 all Maine counties recorded a level of per capita personal income below the national figure, ranging from a low of $6,344 in Waldo County to a high of $9,463 in Cumberland County. Besides Waldo County, Aroostook, Franklin, Hancock, Oxford, Penobscot, Piscataquis, Sagadahoc, Somerset, and Washington counties recorded per capita personal incomes below the statewide figure.

Between 1970 and 1980 ten of Maine's 16 counties recorded per capita income growth above the New England average, further reflecting the fact that the gap between the per capita personal income in Maine and New England is narrowing. However, the most salient feature of per capita personal income in Maine remains the relatively low level.

Median household effective buying income (EBI) figures for each state and county in the United States are published yearly in Sales and Marketing Management magazine. Effective buying income is essentially the total income of the members of a household minus all taxes. It is roughly equivalent to the disposable or spendable income of a household. The median household EBI is that figure above the EBIs of half the households in the area and below the other half. During 1980 Maine's median household effective buying income was $16,336. County median household EBIs varied from a low of $12,681 in Washington County to a high of $18,422 in Cumberland County. Besides Washington County, Androscoggin, Aroostook, Hancock, Knox, Lincoln, Oxford, Piscataquis, Somerset, Waldo, and York counties recorded median household EBIs below the statewide figure.

Between 1975 and 1980 the statewide median household EBI increased by 39.6 percent. Of the counties, Washington recorded the greatest growth with a gain of 54.4 percent. Despite the impressive growth during this five-year period, the median household EBI of Washington County was still the lowest of all Maine counties in 1980.

During 1980 approximately 21.5 percent of Maine households had an effective buying income of under $8,000. Washington County had the greatest percentage (31.6) of households in this category. About 22 percent of Maine households had a 1980 EBI of $25,000 or more. Cumberland (29 percent) and Kennebec (29.2 percent) counties had the greatest percentages of households in this $25,000 and over category.

Weekly wages paid for employment covered under the Maine Employment Security Law averaged $220.35 during 1980. Average weekly wages varied

considerably by industry, from $143.65 for retail trade to $312.28 for transportation and public utilities. The average weekly wage for the retail trade industry can be expected to be relatively low because of the large number of part-time workers in that industry. Also, the retail trade industry includes eating and drinking places, and tips are not included in the average weekly wage figures.

Industries with 1980 average weekly wages above the average for all employment covered under the Maine Employment Security Law were mining; construction; manufacturing; transportation and public utilities; wholesale trade; finance, insurance, and real estate; and state government. Between 1975 and 1980 the average weekly wage for Maine increased 45.1 percent. The increase of 57.7 percent recorded for manufacturing was the largest for any major industry division.

Average weekly wages also exhibited a great deal of variation by county. While the statewide average for 1980 was $220.35, county figures varied from a low of $174.25 for Waldo County to a high of $268.38 for Sagadahoc County. Besides Waldo County, Androscoggin, Aroostook, Hancock, Knox, Lincoln, Piscataquis, Somerset, Washington, and York counties recorded average weekly wages below the statewide average.

Between 1970 and 1980 Maine's average weekly wage increased from $116.51 to $220.35, or by 89.1 percent. Counties recording the greatest percentage increases during this period were Franklin (132.2 percent), Sagadahoc (119.2 percent), and Piscataquis (100.3 percent).

This section has discussed three income measures: per capita personal income, household effective buying income, and average weekly wages. Six Maine counties recorded figures below the statewide average for each of these three income measures. These counties were Aroostook, Hancock, Piscataquis, Somerset, Waldo, and Washington.

During 1981 there were 19,847 families receiving benefits under the Aid to Families with Dependent Children (AFDC) program in Maine. These families contained 54,845 individuals, or about 4.9 percent of the population. The percentage of county populations receiving benefits from the AFDC program ranged from a low of 3.6 percent in Lincoln County to a high of 6.3 percent in Washington County.

Maine recipients under the Food Stamp program numbered 142,335 during 1981. These recipients accounted for approximately 12.7 percent of the population. The percentage of county populations receiving food stamp assistance ranged from 8.9 percent in Sagadahoc County to 25.4 percent in Washington County.

Counties with lower incomes clearly have greater percentages of their populations receiving income assistance. Washington County is the most striking example. Waldo and Somerset counties also have relatively high percentages of their populations receiving income assistance.

During recent years government transfer payments have become an increasingly important source of income in Maine. Wage and salary disbursements

in Maine increased from 2.143 billion dollars in 1970 to 5.179 billion dollars in 1980. This amounted to an increase of almost 142 percent. During that same period, government transfer payments increased from 413 million dollars to 1.533 billion dollars, or by almost 271 percent. Many types of payments are included in the government transfer payment figures, the major ones being social security; AFDC; food stamps; general assistance; retirement for federal, state, and local government workers; workers compensation; and unemployment insurance benefits.

By 1980 wage and salary disbursements in Maine amounted to $4,603 per capita. Government transfer payments were $1,362 per capita. Clearly, government transfer payments are an important source of personal income in Maine. Substantial changes in government transfer payments could be expected to have a significant impact in Maine.

TABLE 11

PER CAPITA PERSONAL INCOME FOR THE UNITED STATES, NEW ENGLAND, MAINE, AND MAINE COUNTIES, 1970 AND 1980

Area	Per Capita Personal Income			
	1970	1980	Percent Change 1970-1980	Percent of United States 1980
United States.....	$3,893	$ 9,511	144.3%	100.0%
New England.....	4,245	10,086	137.6	106.0
Maine.....	3,250	7,868	142.1	82.7
Counties				
Androscoggin.....	3,471	7,873	126.8	82.8
Aroostook.....	2,754	6,355	130.8	66.8
Cumberland.....	3,797	9,463	149.2	99.5
Franklin.....	2,701	6,940	156.9	73.0
Hancock.....	3,089	7,789	152.2	81.9
Kennebec.....	3,367	8,150	142.1	85.7
Knox.....	3,153	8,113	157.3	85.3
Lincoln.....	3,667	8,404	129.2	88.4
Oxford.....	2,926	7,222	146.8	75.9
Penobscot.....	3,048	7,627	150.2	80.2
Piscataquis.....	2,817	6,724	138.7	70.7
Sagadahoc.....	3,107	7,708	148.1	81.0
Somerset.....	2,918	6,537	124.0	68.7
Waldo.....	2,824	6,344	124.6	66.7
Washington.....	2,501	6,400	155.9	67.3
York.....	3,413	7,960	133.2	83.7

Source: U.S. Department of Commerce, Bureau of Economic Analysis.

TABLE 12

MEDIAN HOUSEHOLD EFFECTIVE BUYING INCOME IN MAINE
BY COUNTY, 1975 AND 1980

Area	1975	1980	Net Change 1975-1980	Percent Change 1975-1980
Maine	$11,704	$16,336	$4,632	39.6%
Androscoggin	10,996	15,030	4,034	36.7
Aroostook	10,907	14,707	3,800	34.8
Cumberland	13,529	18,422	4,893	36.2
Franklin	12,258	18,134	5,876	47.9
Hancock	10,342	15,024	4,682	45.3
Kennebec	12,913	18,307	5,394	41.8
Knox	11,261	14,977	3,716	33.0
Lincoln	INA	13,978	INA	INA
Oxford	10,726	16,014	5,288	49.3
Penobscot	12,209	16,768	4,559	37.3
Piscataquis	10,618	14,589	3,971	37.4
Sagadahoc	11,823	17,374	5,551	47.0
Somerset	10,488	14,806	4,318	41.2
Waldo	10,257	14,717	4,460	43.5
Washington	8,214	12,681	4,467	54.4
York	11,663	16,181	4,518	38.7

INA: Information not available.

Source: 1975: Sales and Marketing Management, July 26, 1976, p.C-89.
1980: Sales and Marketing Management, July 27, 1981, p.C-105.

TABLE 13

PERCENT DISTRIBUTION OF MAINE HOUSEHOLDS
BY EFFECTIVE BUYING INCOME
BY COUNTY, 1980

Area	Total Households	0 to $7,999	$8,000 to $9,999	$10,000 to $14,999	$15,000 to $24,999	$25,000 and Over
Maine.....	403,400	21.5%	6.1%	17.5%	32.9%	22.0%
Androscoggin....	35,800	23.7	7.2	19.0	34.3	15.8
Aroostook.....	29,700	22.5	7.2	21.6	32.2	16.5
Cumberland.....	80,200	18.4	5.2	14.9	32.5	29.0
Franklin.....	9,700	17.7	6.4	15.7	33.7	26.5
Hancock.....	15,800	24.3	7.1	18.5	31.1	19.0
Kennebec.....	39,500	18.2	4.9	15.7	32.0	29.2
Knox.....	12,400	25.2	6.6	18.3	31.6	18.3
Lincoln.....	9,700	27.2	6.9	19.3	30.8	15.8
Oxford.....	17,800	22.0	6.3	18.0	35.9	17.8
Penobscot.....	46,800	20.5	5.9	17.2	33.0	23.4
Piscataquis.....	6,400	21.6	8.2	21.9	32.3	16.0
Sagadahoc.....	10,300	21.2	4.4	15.3	33.8	25.3
Somerset.....	15,600	23.4	6.8	20.5	32.2	17.1
Waldo.....	10,100	23.3	7.7	20.1	31.3	17.6
Washington.....	12,500	31.6	8.0	18.6	26.5	15.3
York.....	51,100	22.3	5.7	17.4	34.5	20.1

Source: Sales and Marketing Management, July 27, 1981, p. C-105.

TABLE 14

AVERAGE WEEKLY WAGES PAID IN COVERED EMPLOYMENT
IN MAINE, BY INDUSTRY
1975 AND 1980

Industry Division	1975	1980	Net Change 1975-1980	Percent Change 1975-1980
Total, All Industries.....	$151.83	$220.35	$ 68.52	45.1%
Agriculture, Forestry, and Fishing..	137.98	188.52	50.54	36.6
Mining.....	191.90	301.69	109.79	57.2
Construction.....	187.44	279.26	91.82	49.0
Manufacturing.....	166.77	263.02	96.25	57.7
Transportation and Public Utilities.	208.73	312.28	103.55	49.6
Wholesale Trade.....	195.27	279.39	84.12	43.1
Retail Trade.....	109.98	143.65	33.67	30.6
Finance, Insurance, and Real Estate.	166.62	242.30	75.68	45.4
Services.....	122.65	181.64	58.99	48.1
State Government.....	171.54	254.33	82.79	48.3
Local Government.....	INA	190.30	INA	INA

INA: Information not available.

Source: Employment, Wages, and Contributions, Annual Report, 1980, Maine Department of Labor, Bureau of Employment Security, Division of Economic Analysis and Research.

TABLE 15

AVERAGE WEEKLY WAGES PAID IN COVERED EMPLOYMENT IN MAINE
BY COUNTY, 1970 AND 1980

Area	1970	1980	Net Change 1970-1980	Percent Change 1970-1980
Maine.....	$116.51	$220.35	$103.84	89.1%
Androscoggin.....	106.08	201.13	95.05	89.6
Aroostook.....	114.55	208.00	93.45	81.6
Cumberland.....	122.54	230.21	107.67	87.9
Franklin.....	110.65	256.92	146.27	132.2
Hancock.....	110.15	202.31	92.16	83.7
Kennebec.....	114.21	228.02	113.81	99.6
Knox.....	105.88	197.12	91.24	86.2
Lincoln.....	125.86	178.75	52.89	42.0
Oxford.....	120.19	227.35	107.16	89.2
Penobscot.....	120.75	226.60	105.85	87.7
Piscataquis.....	98.58	197.50	98.92	100.3
Sagadahoc.....	122.44	268.38	145.94	119.2
Somerset.....	105.38	199.62	94.24	89.4
Waldo.....	100.52	174.25	73.73	73.3
Washington.....	109.29	211.79	102.50	93.8
York.....	106.38	200.75	94.37	88.7

Source: Employment, Wages, and Contributions Under the Employment Security Law, Annual Reports, 1970 and 1980, Maine Department of Labor, Bureau of Employment Security, Division of Economic Analysis and Research.

TABLE 16

INCOME IN MAINE COUNTIES AS A PERCENT OF STATEWIDE INCOME
FOR SELECTED INCOME MEASURES
1980

Area	Per Capita Personal Income		Average Weekly Wages Paid in Covered Employment		Median Household Effective Buying Income	
	1980	As a Percent of State	1980	As a Percent of State	1980	As a Percent of State
Maine.....	$7,868	100.0%	$220.35	100.0%	$16,336	100.0%
Androscoggin....	7,873	100.1	201.13	91.3	15,030	92.0
Aroostook.....	6,355	80.8	208.00	94.4	14,707	90.0
Cumberland.....	9,463	120.3	230.21	104.5	18,422	112.8
Franklin.....	6,940	88.2	256.92	116.6	18,134	111.0
Hancock.....	7,789	99.0	202.31	91.8	15,024	92.0
Kennebec.....	8,150	103.6	228.02	103.5	18,307	112.1
Knox.....	8,113	103.1	197.12	89.5	14,977	91.7
Lincoln.....	8,404	106.8	178.75	81.1	13,978	85.6
Oxford.....	7,222	91.8	227.35	103.2	16,014	98.0
Penobscot.....	7,627	96.9	226.60	102.8	16,768	102.6
Piscataquis.....	6,724	85.5	197.50	89.6	14,589	89.3
Sagadahoc.....	7,708	98.0	268.38	121.8	17,374	106.4
Somerset.....	6,537	83.1	199.62	90.6	14,806	90.6
Waldo.....	6,344	80.6	174.25	79.1	14,717	90.1
Washington.....	6,400	81.3	211.79	96.1	12,681	77.6
York.....	7,960	101.2	200.75	91.1	16,181	99.1

Source: See tables 11, 12, and 15.

TABLE 17

INCOME ASSISTANCE PROGRAMS IN MAINE BY COUNTY
1981 AVERAGES

Area	1980 Population	AFDC			Food Stamps			General Assistance 1/		
		Cases	Recipients	Recipients as Percent of 1980 Population	Cases	Recipients	Recipients as Percent of 1980 Population	Cases	Recipients	Recipients as Percent of 1980 Population
Maine.....	1,125,027	19,847	54,845	4.9%	55,829	142,335	12.7%	3,135	7,945	0.7%
Androscoggin...	99,657	2,016	5,706	5.7	5,069	12,213	12.3	367	742	0.7
Aroostook.....	91,331	1,612	4,454	4.9	5,556	14,746	16.1	494	1,448	1.6
Cumberland.....	215,789	3,760	10,425	4.8	9,355	22,081	10.2	551	1,259	0.6
Franklin.....	27,447	457	1,278	4.7	1,190	3,115	11.3	3	9	0.0
Hancock.....	41,781	609	1,614	3.9	2,060	5,372	12.9	30	87	0.2
Kennebec.....	109,889	2,006	5,584	5.1	5,403	13,505	12.3	467	1,124	1.0
Knox.....	32,941	514	1,395	4.2	1,691	4,290	13.0	51	138	0.4
Lincoln.....	25,691	340	925	3.6	1,037	2,909	11.3	16	46	0.2
Oxford.....	48,968	925	2,568	5.2	2,922	7,267	14.8	99	317	0.6
Penobscot.....	137,015	2,381	6,346	4.6	5,636	15,062	11.0	549	1,383	1.0
Piscataquis....	17,634	261	744	4.2	822	2,293	13.0	45	134	0.8
Sagadahoc.....	28,795	391	1,066	3.7	1,011	2,569	8.9	28	81	0.3
Somerset.....	45,046	929	2,622	5.8	2,945	7,737	17.2	74	213	0.5
Waldo.....	28,414	613	1,693	6.0	2,026	5,647	19.9	44	119	0.4
Washington.....	34,963	821	2,190	6.3	3,387	8,864	25.4	82	253	0.7
York.....	139,666	2,212	6,235	4.5	5,719	14,665	10.5	235	592	0.4

Source: Maine Department of Human Services, Bureau of Health Planning and Development, Division of Data and Research.
1/ These figures represent data submitted by individual municipalities to the Maine Department of Human Services.

TABLE 18

SELECTED COMPONENTS OF PERSONAL INCOME IN MAINE, 1970 AND 1980

Income Component	1970	1980	Net Change 1970-1980	Percent Change 1970-1980
Wage and Salary Disbursements.....	$2,142,609,000	$5,178,613,000	$3,036,004,000	141.7%
Total Government Transfer Payments.....	413,334,000	1,532,654,000	1,119,320,000	270.8
(Population).....	(993,663)	(1,125,027)	(131,364)	(13.2)
Wage and Salary Disbursements Per Capita.....	2,156	4,603	2,447	113.5
Transfer Payments Per Capita.....	416	1,362	946	227.4

Source: Regional Economic Information System, Bureau of Economic Analysis, U.S. Department of Commerce, August 1981.

FIGURE 6

PERCENTAGE CHANGE FROM PREVIOUS YEAR IN MAINE AVERAGE WEEKLY WAGES AND U.S. CONSUMER PRICE INDEX, ANNUAL AVERAGES, 1976-1981

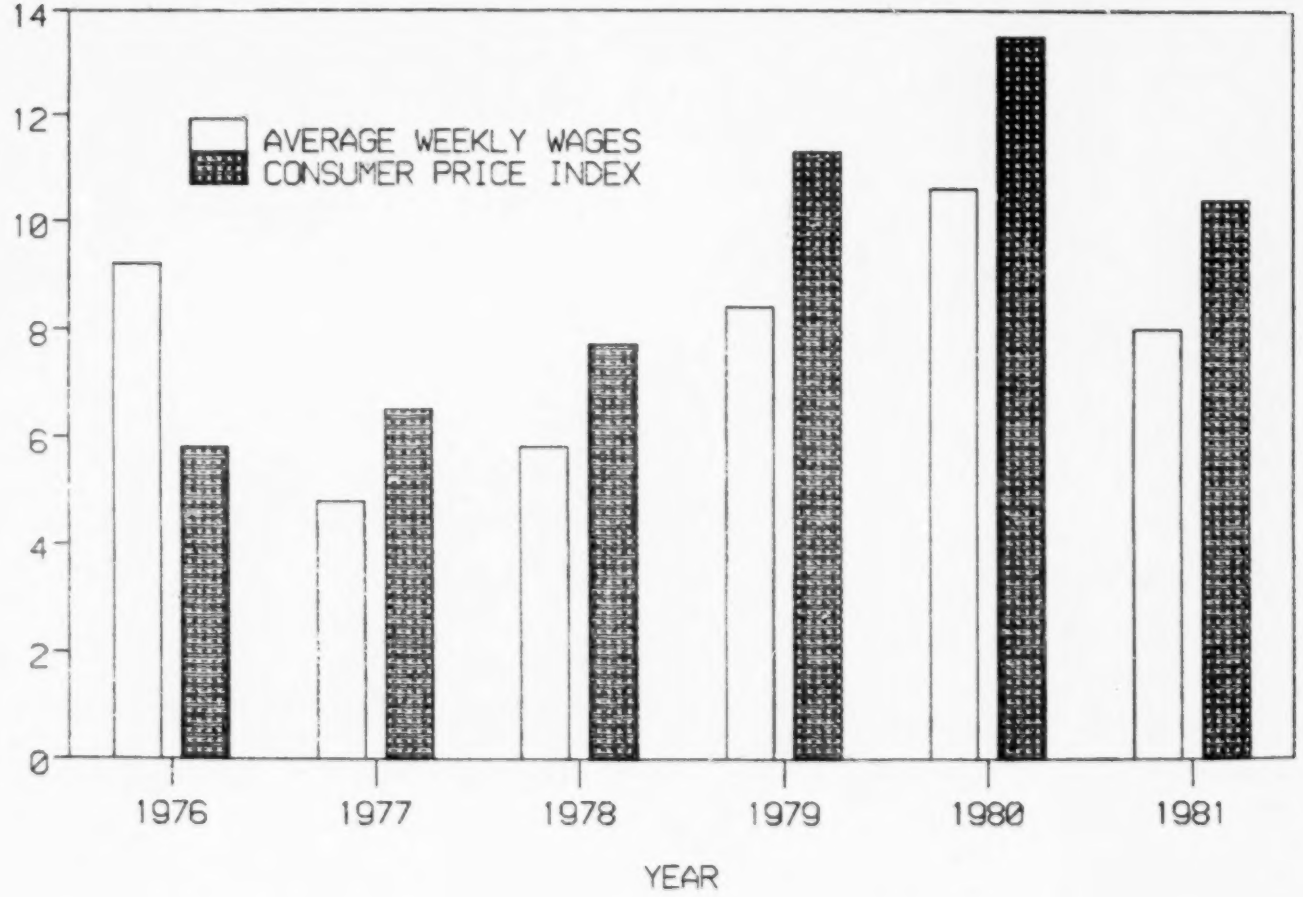
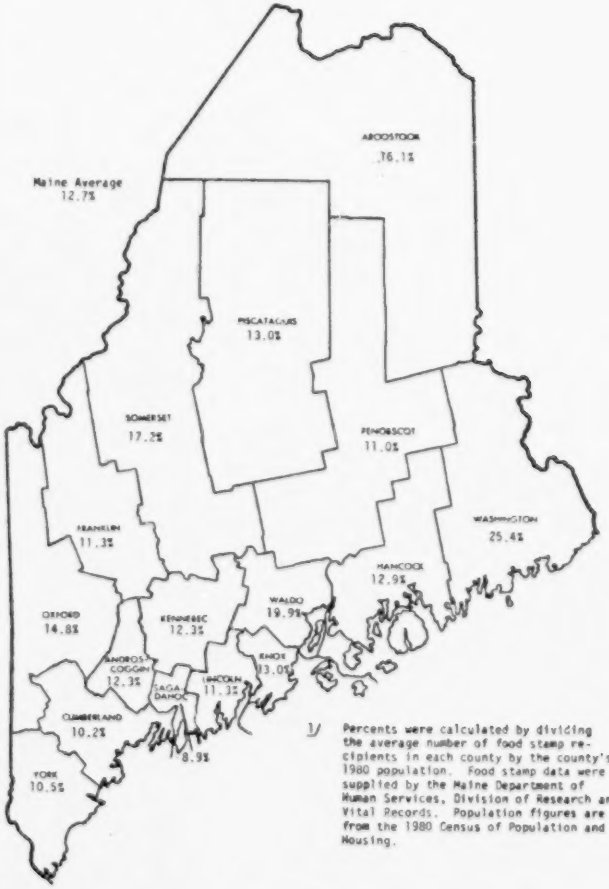


FIGURE 7

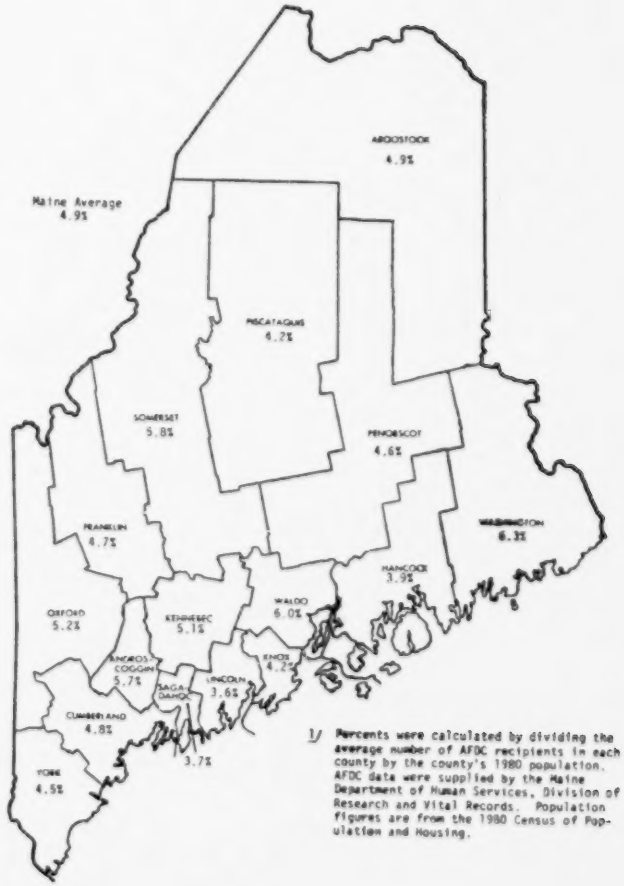
PERCENT OF COUNTY POPULATIONS
RECEIVING FOOD STAMPS,
MAINE, 1981 1/



1/ Percents were calculated by dividing the average number of food stamp recipients in each county by the county's 1980 population. Food stamp data were supplied by the Maine Department of Human Services, Division of Research and Vital Records. Population figures are from the 1980 Census of Population and Housing.

FIGURE 8

PERCENT OF COUNTY POPULATIONS
RECEIVING AID TO FAMILIES WITH
DEPENDENT CHILDREN (AFDC),
MAINE, 1981 1/



1/ Percents were calculated by dividing the average number of AFDC recipients in each county by the county's 1980 population. AFDC data were supplied by the Maine Department of Human Services, Division of Research and Vital Records. Population figures are from the 1980 Census of Population and Housing.

CHARACTERISTICS OF APPLICANTS REGISTERED WITH THE BUREAU OF EMPLOYMENT SECURITY

During September 1981 there were 36,684 active applicants registered with offices of the Maine Job Service. The characteristics of these applicants were recorded by the Employment Security Automated Reporting System (ESARS). An active applicant is considered by a Job Service office to be available for referral to job openings. Applicants may be unemployed or employed but seeking alternative employment. The Job Service applicants provide an indicator of those in need of employment and training services.

Of the 36,684 active applicants, a majority (51.6 percent) were male. Approximately 64.6 percent were between 22 and 44 years of age. About 2.7 percent had less than eight years of education and 28.1 percent attended high school but did not graduate. With over 30 percent of the applicants lacking a high school diploma, they could be expected to encounter difficulty obtaining a good job. Veterans accounted for 15.3 percent of the Job Service applicants. Another 5.3 percent of the applicants were handicapped, 6.2 percent were food stamp recipients, 19.6 percent were welfare recipients, and 29.7 percent were economically disadvantaged.

Female applicants numbered 17,749. Compared with their male counterparts, the female applicants were slightly older as a group. While 29.7 percent of the total applicant pool were economically disadvantaged, 45.2 percent of the female applicants were economically disadvantaged. About 36 percent of the females were welfare recipients. Poverty is clearly more prevalent among female active applicants.

The Maine Job Service listed 509 minority applicants. Approximately 57.8 percent of the minority applicants were male. A very significant indicator is that 14.5 percent of the minority applicants had not attended high school. The comparable figure for the total applicant pool was 2.7 percent. A breakdown of the minority applicants by race indicates that 22.6 percent were black, 21 percent were American Indians, 40.3 percent were Asian or Pacific Islanders, and 16.1 percent were Hispanic. About 50.9 percent of these applicants were economically disadvantaged and 37.5 percent were welfare recipients. Low educational attainment and low incomes clearly characterized the minority applicants.

There were 5,600 veterans registered as active applicants. The veterans were overwhelmingly male (96.1 percent), and had attained more years of education than their nonveteran counterparts. Only 15.3 percent of the veterans were economically disadvantaged compared with 29.7 percent of the total applicant pool.

Economically disadvantaged applicants numbered 10,894. Most of these applicants (73.6 percent) were female. About 74.6 percent were between 22 and 44 years of age. Lack of education is clearly a factor in the incidence of economic disadvantage as almost 42.7 percent of the economically disadvantaged applicants had not completed high school.

During January 1982 there were 34,848 active applicants registered with the Maine Job Service. They exhibited essentially the same characteristics as the September 1981 applicants. There were 16,720 females; 4,695 veterans; 7,143 under 22 years of age; 22,883 between 22 and 44 years of age; and 4,822 applicants 45 years old or older. There were 451 minority applicants; 9,136 economically disadvantaged applicants; 1,697 handicapped applicants; and 7,119 applicants who were welfare recipients.

Table 20 lists characteristics of claimants receiving benefits under the Regular State Unemployment Insurance Program for up to 26 weeks of unemployment. During January 1982 the typical recipient was male, a high school graduate, a primary wage earner, and was experiencing a temporary layoff. The largest numbers of claimants were separated from a construction or manufacturing industry. The characteristics of the insured unemployed vary with the season. For instance, males normally account for an increased percentage of the insured unemployed during the winter months when there are temporary layoffs from the construction and lumber and wood products industries.

TABLE 19

PERCENT DISTRIBUTION OF SELECTED CHARACTERISTICS OF ACTIVE APPLICANTS IN MAINE, SEPTEMBER 1981 1/

Characteristics	Total	Female	Minority	Veteran	Economically Disadvantaged
Total (100.0 percent).....	36,684	17,749	509	5,600	10,894
	Percent Distribution by Group				
Sex					
Male.....	51.6	0.0	57.8	96.1	26.4
Female.....	48.4	100.0	42.2	3.9	73.6
Age					
15 and Under.....	0.2	0.1	0.0	0.1	0.1
16-19.....	11.3	10.6	10.6	0.9	9.3
20-21.....	9.6	8.4	9.4	3.8	6.0
22-44.....	64.6	66.2	68.6	69.9	74.6
45-64.....	13.0	13.8	11.4	24.4	9.9
65 and Over.....	1.3	0.9	0.0	0.9	0.1
Education					
0-7.....	2.7	2.4	14.5	1.4	4.0
8-11.....	28.1	28.2	29.1	17.3	38.7
12.....	46.3	49.8	36.9	49.5	45.5
Over 12.....	22.9	19.6	19.5	31.8	11.8
Environment					
Urban.....	41.7	42.4	57.8	42.5	44.1
Rural.....	58.3	57.6	42.2	57.5	55.9
Race					
White.....	96.9	97.2	0.0	97.9	96.5
Black.....	0.3	0.3	22.6	0.5	0.4
American Indian.....	0.3	0.3	21.0	0.4	0.4
Asian and Pacific Islander....	0.6	0.5	40.3	0.1	1.3
Hispanic.....	0.2	0.2	16.1	0.2	0.3
Information Not Available.....	1.7	1.5	0.0	0.9	1.1
Veteran					
Total.....	15.3	1.2	12.6	100.0	7.8
Vietnam Era.....	6.0	0.4	5.9	39.5	3.0
Disabled.....	0.6	0.1	0.8	4.0	0.3
Handicapped.....	5.3	5.0	5.7	9.7	9.3
Food Stamp Recipient.....	6.2	4.6	7.3	4.5	3.0
Welfare Recipient.....	19.6	36.0	37.5	3.5	65.7
Migrant or Seasonal Worker.....	0.1	0.0	0.2	0.2	0.1
Unemployment Insurance Claimant.	21.5	17.6	12.0	25.5	8.2
Economically Disadvantaged.....	29.7	45.2	50.9	15.3	100.0

1/ An active applicant is one who is considered by a Job Service Office to be available for referral to job openings.

Source: Characteristics of the Active File, Table 93, Employment Security Automated Reporting System (ESARS), Maine Department of Labor, Bureau of Employment Security, Division of Economic Analysis and Research.

TABLE 20

PERCENT DISTRIBUTION OF THE CHARACTERISTICS OF THE UNEMPLOYED
IN MAINE, JANUARY 1982 1/

Characteristics	Percent of Total
Total (100.0 Percent)	16,372
Sex	
Male	64.0
Female	36.0
Years of Education	
0-7	3.0
8-11	29.1
12	52.9
Over 12	15.0
Veteran	
Yes	22.2
No	77.8
Reason for Unemployment	
Temporary Layoff	88.3
Discharged	6.5
Left Voluntarily	5.1
Labor Dispute	0.1
Family Responsibility	
Primary Wage Earner	55.5
Secondary Wage Earner	25.3
Lives Alone	19.2
Occupation	
Professional, Technical, and Managerial	7.3
Clerical and Sales	11.7
Service	8.8
Farming, Fishery, Forestry, and Related	2.7
Processing	5.3
Machine Trades	10.7
Benchwork	8.5
Structural Work	22.6
Miscellaneous	22.4
Industry of Separation	
Agriculture, Forestry, and Fishing	2.2
Mining	0.3
Construction	21.9
Manufacturing	42.3
Transportation and Public Utilities	2.9
Wholesale Trade	3.8
Retail Trade	13.1
Finance, Insurance, and Real Estate	0.9
Services	10.6
Public Administration	2.0

1/ Characteristics derived from a sample of continued claimants filing for regular unemployment benefits for a full week of unemployment under the Regular State Unemployment Insurance Program (maximum 26 weeks).

SUMMARY OF POPULATION GROUPS IN NEED OF EMPLOYMENT PROGRAM SERVICES

This report has characterized the Maine population with an emphasis on population groups that can be expected to experience problems with successful labor market participation. Characteristics of those most in need of employment-related services are highlighted in this section. The intent of this report is not to preclude any particular group from the services provided by employment and training programs. Any individual can have labor market-related problems. However, some groups appear to be more in need of services than others.

Those groups appearing to be most in need of employment program services are females, youths, high school dropouts, and minorities. Some of the more difficult situations are likely to involve people who belong to more than one of these groups. There also appears to be an incidence of relatively poor labor market prospects associated with geography within the state of Maine. A special emphasis on certain Maine counties should be considered by program planners.

Since 1970 females have been participating in Maine's labor force in rapidly increasing numbers. The female labor force participation rate is expected to increase from 41.2 percent in 1970 to 50.5 percent in FY 1983. Maine's female labor force is expected to increase from 147,641 in 1970 to a projected 236,322 in FY 1983. Historically females have experienced a higher level of unemployment than males. The female unemployment rate is expected to be 7.7 percent during FY 1983, compared to a projected male rate of 6.9 percent.

In addition to being unemployed in relatively greater numbers, females are more likely to be in a poverty status than their male counterparts. While females accounted for 48.4 percent of Maine Job Service applicants, they comprised 73.6 percent of the economically disadvantaged applicants.

Youths tend to experience a much higher rate of unemployment than older workers. While Maine's unemployment rate is expected to average approximately 7.3 percent during FY 1983, the projected rate for 16 to 19 year olds is 18.9 percent and 20 to 24 year olds are expected to experience a rate of 11.6 percent. Maine's labor force has had to absorb many new members as a result of the post World War II baby boom. The number of 16 to 19 year olds in the labor force is projected to increase from 27,732 in 1970 to 37,975 in FY 1983. The number of 20 to 24 year olds is projected to increase from 44,841 to 68,041. As a previous section detailed, the birthrate has declined substantially. Eventually this will result in a decline in the population of the age group entering the labor force. However, such will not be the case during the next several years.

The problem of high youth unemployment is related to the problems encountered by Maine's high school dropouts. Given the emphasis placed on a high school diploma in today's economy, high school dropouts face very poor prospects of finding a secure, well paying job. Between 1977 and 1981, Maine's secondary school dropout rate averaged 4.4 percent. This represented an average of 3,186 dropouts each year. While 30.8 percent

of the Job Service applicants did not have a high school diploma, about 42.7 percent of the economically disadvantaged applicants had not finished high school. Low income and low educational attainment are clearly related.

Although minorities account for a small percentage of Maine's population, they experience a relatively high level of unemployment. Projections for FY 1983 indicate an unemployment rate of 7.2 percent for whites and an unemployment rate of 20.2 percent for blacks. While 29.7 percent of Maine Job Service applicants were classified as economically disadvantaged, about 50.9 percent of the minority applicants were so classified. Minority applicants also exhibited a low level of educational attainment, with 14.5 percent of them having less than eight years of education.

Residents of certain Maine counties can be expected to face relatively poor labor market prospects. Aroostook, Somerset, Waldo, and Washington counties have consistently high rates of unemployment, low incomes, and relatively high percentages of their populations receiving benefits from income assistance programs. While the statewide unemployment rate averaged 7.2 percent during 1981, Aroostook, Somerset, Waldo, and Washington counties all recorded rates in excess of 10 percent. Per capita personal income in Maine was $7,868 during 1980. Aroostook ($6,355), Somerset ($6,537), Waldo ($6,344), and Washington ($6,400) counties recorded the lowest figures. Approximately 12.7 percent of Maine's population were recipients under the Food Stamp program during 1980. Aroostook (16.1 percent), Somerset (17.2 percent), Waldo (19.9 percent), and Washington (25.4 percent) counties had the greatest percentages of their populations receiving benefits under this program. These four counties clearly deserve special emphasis on the part of program planners.

SECTION III

ASSESSING JOB OPPORTUNITIES

LONG-TERM CHANGES IN THE INDUSTRIAL STRUCTURE

Total nonfarm wage and salary employment in Maine increased from an annual average of 375,300 in 1976 to 417,100 in 1981, or by 11.1 percent. Manufacturing employment increased by 10 percent from 102,500 to 112,800. Nonmanufacturing employment increased from 272,800 to 304,300, or by 11.5 percent. By 1981 nonmanufacturing industries accounted for 73 percent of Maine's nonfarm wage and salary employment.

Within the manufacturing sector, the durable goods industries recorded the most impressive growth between 1976 and 1981. Durable goods employment increased from 33,300 to 41,400, or by 24.3 percent.

Employment in Maine's lumber and wood products industry declined by 300 during this five-year period. This industry has been adversely affected by national economic conditions. The continuing high level of interest rates and the resultant drop in building construction have dampened the demand for lumber and other wood products.

Metals and machinery employment increased by 39 percent between 1976 and 1981. This industry gained an additional 4,600 jobs during this period, with employment increasing from 11,800 to 16,400. Employment in the other durable goods category increased from 7,900 to 11,700, or by an impressive 48.1 percent. Industries comprising the other durable goods category include furniture and fixtures; stone, clay, and glass products; transportation equipment; and instruments. Most of the other durable goods growth was attributable to transportation equipment.

Employment in the manufacture of nondurable goods increased from 69,200 in 1976 to 71,400 in 1981, or by a modest 3.2 percent. Although this growth was not impressive, the nondurables group contains several industries engaged in processing and manufacturing goods derived from Maine's natural resources. These industries remain an important part of the State's economic base.

Employment in the food and kindred products industry decreased from 10,100 in 1976 to 9,200 in 1981, or by 8.9 percent. This decline was largely the result of the loss of poultry processing plants. The processing of potatoes, fish, and blueberries remain an important part of this industry.

Maine's paper and allied products industry recorded modest growth between 1976 and 1981. Employment increased from 17,300 to 18,400, or by 6.4 percent. Paper and allied products remains one of Maine's most vital industries and provides some of the best paying jobs.

Textile mill products employment declined by 600 between 1976 and 1981. Although small, the apparel industry recorded impressive growth as employment increased from 3,700 to 4,600, or by 24.3 percent.

Leather and leather products employment increased by 1,500 between 1976 and 1981, from 19,600 to 21,100. This industry had long been declining

in Maine but several quality shoe manufacturers have lead a resurgence during the past few years.

Industries comprising the other nondurable goods group remained essentially stable during the 1976-1981 period. The other nondurables group includes printing and publishing, chemicals, petroleum products, rubber and plastics products, and other miscellaneous manufacturing industries.

Within the nonmanufacturing sector, the services industry group provided the most impressive growth between 1976 and 1981. Employment in services increased from 63,800 to 80,200, or by 25.7 percent. The services industry group share of total nonfarm wage and salary employment increased from 17 percent to 19.2 percent. Services industries recording the most impressive growth were business services (71.4 percent), legal services (40 percent), and health services (30.9 percent). The health services industry, responding to a growing population and an increasing demand for quality health care, provided 8,200 new jobs to the Maine economy during this period.

During 1976 construction employment in Maine averaged 22,100. By 1981 the average had fallen to 17,300, representing a decrease of 21.7 percent. High interest rates and the resulting drop in building construction have been responsible for this decline. Construction accounted for 5.9 percent of total nonfarm wage and salary employment in 1976. By 1981 it accounted for only 4.2 percent of the total.

Transportation and public utilities recorded modest growth between 1976 and 1981, increasing from 17,900 to 18,500. These industries provide some of Maine's best paying and most stable jobs. Rapid growth is not expected by these industries. Once transportation, utility, and communication systems are in place, only slow growth is anticipated.

Employment in wholesale and retail trade registered impressive growth during the period since 1976, increasing from 79,200 to 88,700. The 9,500 new jobs were needed to serve an expanding and increasingly affluent population. Industries adding significant numbers of new jobs were eating and drinking places (+3,900), food stores (+2,500) and general merchandise stores (+1,200).

Employment in one of Maine's retail trade industries, automotive dealers and gasoline service stations, declined by 1,300 during this period. This industry has been hurt by the decline in car sales and the trend for people to do more of their own repair and maintenance work. Self-service gasoline stations have also become more common.

Approximately 2,400 new jobs have been added to Maine's finance, insurance, and real estate industries since 1976, representing an increase of 16.4 percent. Employment in banking increased by 1,300. Insurance companies also recorded solid growth during this period.

Government employment increased by 9.8 percent between 1976 and 1981. Local government added 3,900 jobs, state government increased by 2,100,

and the federal government added 1,400 jobs in Maine.

A more specific discussion of some individual industries will follow in a subsequent section. An important note is in order at this point. Although growth in nonmanufacturing industries was most impressive between 1976 and 1981, the manufacturing growth that occurred was very important. The growth in manufacturing, coupled with an increasing population, stimulated growth in the nonmanufacturing sector. Manufacturing remains the economic base of the State and relies heavily on the many natural resources, the most important being forests, fish, and potatoes.

TABLE 21

NONFARM WAGE AND SALARY EMPLOYMENT IN MAINE BY INDUSTRY
1976 AND 1981
(In thousands)

Industry	Employment			
	1976	1981	Change	
			Net	Percent
Total Nonfarm Wage and Salary Employment	375.3	417.1	41.8	11.1%
Manufacturing	102.5	112.8	10.3	10.0
Durable Goods	33.3	41.4	8.1	24.3
Lumber and Wood Products	13.6	13.3	- 0.3	- 2.2
Metals and Machinery	11.8	16.4	4.6	39.0
Other Durable Goods 1/	7.9	11.7	3.8	48.1
Nondurable Goods	69.2	71.4	2.2	3.2
Food and Kindred Products	10.1	9.2	- 0.9	- 8.9
Textile Mill Products	8.7	8.1	- 0.6	- 6.9
Apparel	3.7	4.6	0.9	24.3
Paper and Allied Products	17.3	18.4	1.1	6.4
Leather and Leather Products	19.6	21.1	1.5	7.7
Other Nondurable Goods 2/	9.8	10.0	0.2	2.0
Nonmanufacturing	272.8	304.3	31.5	11.5
Contract Construction	22.1	17.3	- 4.8	-21.7
Transportation and Public Utilities	17.9	18.5	0.6	3.4
Wholesale and Retail Trade	79.2	88.7	9.5	12.0
Finance, Insurance, and Real Estate	14.6	17.0	2.4	16.4
Services and Mining	63.8	80.2	16.4	25.7
Government	75.2	82.6	7.4	9.8

1/ Includes Furniture and Fixtures; Stone, Clay, and Glass Products; Transportation Equipment; and Instruments.

2/ Includes Printing and Publishing; Chemicals; Petroleum Products; Rubber and Plastics Products; and Miscellaneous Industries.

Source: Maine Department of Labor, Bureau of Employment Security, Division of Economic Analysis and Research.

TABLE 22

ANNUAL AVERAGE WAGE AND SALARY EMPLOYMENT IN NONFARM INDUSTRIES IN MAINE 1972-1981 1/

(In thousands)

Developed by the Maine Department of Labor in cooperation with the United States Bureau of Labor Statistics

Industry	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972
Total Nonfarm Wage and Salary Employment	417.1	418.3	415.9	405.6	387.8	375.3	356.9	361.5	354.8	343.7
Total Manufacturing	112.8	113.2	114.6	111.3	105.9	102.5	96.3	105.1	104.5	102.4
Durable Goods	41.4	41.8	41.7	38.5	34.3	33.3	31.6	35.9	34.0	32.4
Lumber and Wood Products	13.3	13.6	14.7	14.7	13.6	13.6	12.5	14.7	14.2	13.4
Metals and Machinery	16.4	16.8	16.6	14.3	12.7	11.8	10.9	12.8	12.6	11.7
Other Durable Goods 2/	11.7	11.4	10.4	9.5	8.0	7.9	8.2	8.4	7.2	7.3
Nondurable Goods	71.4	71.4	72.9	72.8	71.6	69.2	64.7	69.2	70.5	70.0
Food and Kindred Products	9.2	10.4	10.8	10.7	10.6	10.1	10.0	10.3	10.4	11.5
Textile Mill Products	8.1	8.1	8.9	9.0	9.2	8.7	7.7	8.9	9.3	9.0
Apparel	4.6	4.6	4.4	4.2	3.8	3.7	3.4	3.7	3.7	3.4
Paper and Allied Products	18.4	18.3	18.4	17.9	18.1	17.3	16.9	17.9	17.9	17.4
Leather and Leather Products	21.1	20.1	20.2	21.1	20.1	19.6	17.4	18.7	19.7	19.7
Other Nondurable Goods 3/	10.0	9.9	10.2	9.9	9.8	9.8	9.3	9.7	9.5	9.0
Total Nonmanufacturing	304.3	305.1	301.3	294.3	281.9	272.8	260.6	256.4	250.3	241.3
Contract Construction	17.3	19.5	19.4	19.4	19.8	22.1	18.6	19.3	19.4	18.6
Transportation and Public Utilities	18.5	18.7	18.7	18.0	18.0	17.9	17.7	18.3	17.9	17.6
Wholesale and Retail Trade	88.7	88.9	89.6	88.3	83.6	79.2	75.7	75.2	74.7	71.2
Finance, Insurance, and Real Estate	17.0	16.5	16.2	15.7	15.3	14.6	14.2	14.2	13.8	12.9
Services and Mining	80.2	78.2	74.8	71.4	67.5	63.8	59.6	56.5	53.8	51.6
Government 4/	82.6	83.3	82.6	81.5	77.7	75.2	74.8	72.9	70.7	69.4

1/ Data presented exclude domestics in private households, proprietors, self-employed, and unpaid family workers. Averages are developed from mid-month payroll data and relate to full- and part-time wage and salary workers.

2/ Includes: Furniture and Fixtures; Stone, Clay, and Glass Products; Transportation Equipment; and Instruments.

3/ Includes: Printing and Publishing; Chemicals; Petroleum Products; Rubber and Plastics Products; and Miscellaneous Industries.

4/ These estimates represent Federal, State, and local government employment. Regular teachers are included in the summer months whether or not specifically paid in these months.

Note: Estimates are based on the 1972 Standard Industrial Classification and are based upon a revised benchmark and more complete returns from employers.

TABLE 23

PERCENT DISTRIBUTION OF ANNUAL AVERAGE WAGE AND SALARY EMPLOYMENT
FOR NONFARM INDUSTRIES IN MAINE, 1972-1981

Industry	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972
Total Nonfarm Wage and Salary Employment	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Total Manufacturing	27.0	27.0	27.6	27.4	27.3	27.3	27.0	29.1	29.5	29.8
Durable Goods	9.9	9.9	10.0	9.5	8.8	8.9	8.9	9.9	9.6	9.4
Lumber and Wood Products	3.2	3.2	3.5	3.6	3.5	3.6	3.5	4.1	4.0	3.9
Metals and Machinery	3.9	4.0	4.0	3.5	3.3	3.2	3.1	3.5	3.6	3.4
Other Durable Goods	2.8	2.7	2.5	2.4	2.0	2.1	2.3	2.3	2.0	2.1
Nondurable Goods	17.1	17.1	17.6	17.9	18.5	18.4	18.1	19.2	19.9	20.4
Food and Kindred Products	2.2	2.5	2.6	2.6	2.7	2.7	2.8	2.8	2.9	3.4
Textile Mill Products	1.9	2.0	2.1	2.2	2.4	2.3	2.2	2.5	2.6	2.6
Apparel	1.1	1.1	1.1	1.0	1.0	1.0	0.9	1.0	1.0	1.0
Paper and Allied Products	4.4	4.3	4.4	4.4	4.7	4.6	4.7	5.0	5.1	5.1
Leather and Leather Products	5.1	4.9	4.9	5.2	5.2	5.2	4.9	5.2	5.5	5.7
Other Nondurable Goods	2.4	2.3	2.5	2.5	2.5	2.6	2.6	2.7	2.7	2.6
Total Nonmanufacturing	73.0	73.0	72.4	72.6	72.7	72.7	73.0	70.9	70.5	70.2
Contract Construction	4.2	4.7	4.7	4.8	5.1	5.9	5.2	5.3	5.5	5.4
Transportation and Public Utilities	4.4	4.5	4.5	4.4	4.6	4.8	5.0	5.1	5.0	5.1
Wholesale and Retail Trade	21.3	21.3	21.5	21.8	21.6	21.1	21.2	20.8	21.0	20.7
Finance, Insurance, and Real Estate	4.1	3.9	3.9	3.9	4.0	3.9	4.0	3.9	3.9	3.8
Services and Other Nonmanufacturing	19.2	18.8	18.0	17.6	17.4	17.0	16.7	15.6	15.2	15.0
Government	19.8	19.8	19.8	20.1	20.0	20.0	20.9	20.2	19.9	20.2

Source: Maine Department of Labor, Bureau of Employment Security, Division of Economic Analysis and Research.

TABLE 24

CHARACTERISTICS OF NONFARM INDUSTRIES IN MAINE, 1981
(Employment in thousands)

Industry	Employment	Percent of Total Employment 1/	Number of Firms 2/	Average Weekly Wages 2/
Total Nonfarm Employment	417.1	100.0%	27,357	
Manufacturing	112.8	27.0		
Durable Goods	41.4	9.9		
Lumber and Wood Products	13.3	3.2	791	249.14
Furniture and Fixtures	0.9	0.2	30	262.77
Stone, Clay, and Glass Products	1.1	0.3	73	298.99
Primary Metal Industries	0.4	0.1	12	304.40
Fabricated Metal Products	4.1	1.0	108	320.73
Machinery, except Electrical	4.1	1.0	129	317.96
Electrical and Electronic Machinery	7.8	1.9	47	271.98
Transportation Equipment	8.9	2.1	98	346.93
Instruments	0.8	0.2	14	224.53
Nondurable Goods	71.4	17.1		
Food and Kindred Products	9.2	2.2	192	231.15
Textile Mill Products	8.1	1.9	62	237.97
Apparel	4.6	1.1	52	205.98
Paper and Allied Products	18.4	4.4	48	427.64
Printing and Publishing	3.8	0.9	207	332.92
Chemicals and Allied Products	1.3	0.3	32	338.86
Petroleum and Coal Products	0.1	*	9	293.30
Rubber and Miscellaneous Plastics Products	3.8	0.9	37	247.95
Leather and Leather Products	21.1	5.1	104	221.45
Miscellaneous Manufacturing	1.0	0.2	43	195.99
Nonmanufacturing	304.3	73.0		
Construction	17.3	4.1		
General Building Contractors	5.9	1.4	1,321	291.40
Heavy Construction Contractors	3.4	0.8	223	318.06
Special Trade Contractors	8.0	1.9	2,092	268.02
Transportation and Public Utilities	18.5	4.4		
Railroad Transportation	2.6	0.6	n/a	n/a
Local and Suburban Transit	1.0	0.2	102	131.70
Trucking and Warehousing	4.7	1.1	635	350.07
Water Transportation	0.8	0.2	117	217.25
Transportation by Air	0.6	0.1	47	302.58
Pipe Lines, except Natural Gas	0.1	*	n/a	n/a
Transportation Services	0.3	0.1	72	211.58
Communication	5.1	1.2	113	366.57
Electric, Gas, and Sanitary Services	3.3	0.8	152	351.68
Wholesale and Retail Trade	88.7	21.3		
Wholesale Trade	18.8	4.5		
Durable Goods	9.2	2.2	1,200	310.03
Nondurable Goods	9.6	2.3	1,015	269.63
Retail Trade	69.9	16.8		
Building Materials and Garden Supplies	3.4	0.8	492	219.76
General Merchandise Stores	8.5	2.0	418	142.65

CHARACTERISTICS OF NONFARM INDUSTRIES IN MAINE, 1981 (cont'd)

Industry	Employment	Percent of Total Employment 1/	Number of Firms 2/	Average Weekly Wages 2/
Retail Trade (cont'd)				
Food Stores	14.1	3.4	1,318	136.17
Auto Dealers and Service Stations	8.3	2.0	1,290	223.58
Apparel and Accessory Stores	3.5	0.8	508	137.97
Furniture and Home Finishing Stores	1.9	0.5	434	206.18
Eating and Drinking Places	19.8	4.7	1,737	97.20
Miscellaneous Retail	10.4	2.5	1,625	180.04
Finance, Insurance, and Real Estate	17.0	4.1		
Banking	7.0	1.7	271	217.09
Credit Agencies Other Than Banks	1.2	0.3	209	221.73
Security and Commodity Brokers	0.3	0.1	55	505.60
Insurance Carries and Agents	6.6	1.6	535	n/a
Real Estate, Holding, and Combination	1.9	0.5	772	n/a
Services and Mining	80.2	19.2		
Hotels and Other Lodging Places	6.2	1.5	843	109.48
Personal Services	3.3	0.8	664	148.53
Business Services	6.0	1.4	834	186.48
Auto Repair and Services	2.2	0.5	593	215.35
Miscellaneous Repair Services	1.0	0.2	285	250.72
Motion Pictures	0.4	0.1	73	91.34
Amusement and Recreation Services	2.2	0.5	388	122.51
Health Services	34.7	8.3	1,736	215.30
Legal Services	2.1	0.5	535	282.05
Educational Services	6.5	1.6	n/a	n/a
Social Services	5.9	1.4	357	155.17
Museums and Gardens	0.2	*	10	149.01
Membership Organizations	5.1	1.2	n/a	n/a
Miscellaneous Services	3.3	0.8	495	315.49
Agricultural Services	0.9	0.2	273	271.33
Mining	0.2	*		
Government	82.6	19.8		
Federal	17.8	4.3		
State	22.5	5.4		
Local	42.3	10.1		

1/ Figures may not add due to rounding.

2/ Average wages and number of firms in the second quarter of 1981, Employment, Wages, and Contributions, ES-202, Maine Department of Labor, Bureau of Employment Security, Division of Economic Analysis and Research.

n/a - Not available.

* Less than 0.05 percent.

TABLE 25

GOVERNMENT EMPLOYMENT IN MAINE, 1976 AND 1981
(In thousands)

Type of Government	Annual Average Employment			
	1976	1981	Change	
			Net	Percent
Total Government	75.2	82.6	7.4	9.8%
Federal	16.4	17.8	1.4	8.5
State	20.4	22.5	2.1	10.3
Local	38.4	42.3	3.9	10.2

Source: Maine Department of Labor, Bureau of Employment Security, Division of Economic Analysis and Research.

FIGURE 9

DISTRIBUTION OF NONFARM WAGE AND SALARY EMPLOYMENT
MAINE, 1972-1981

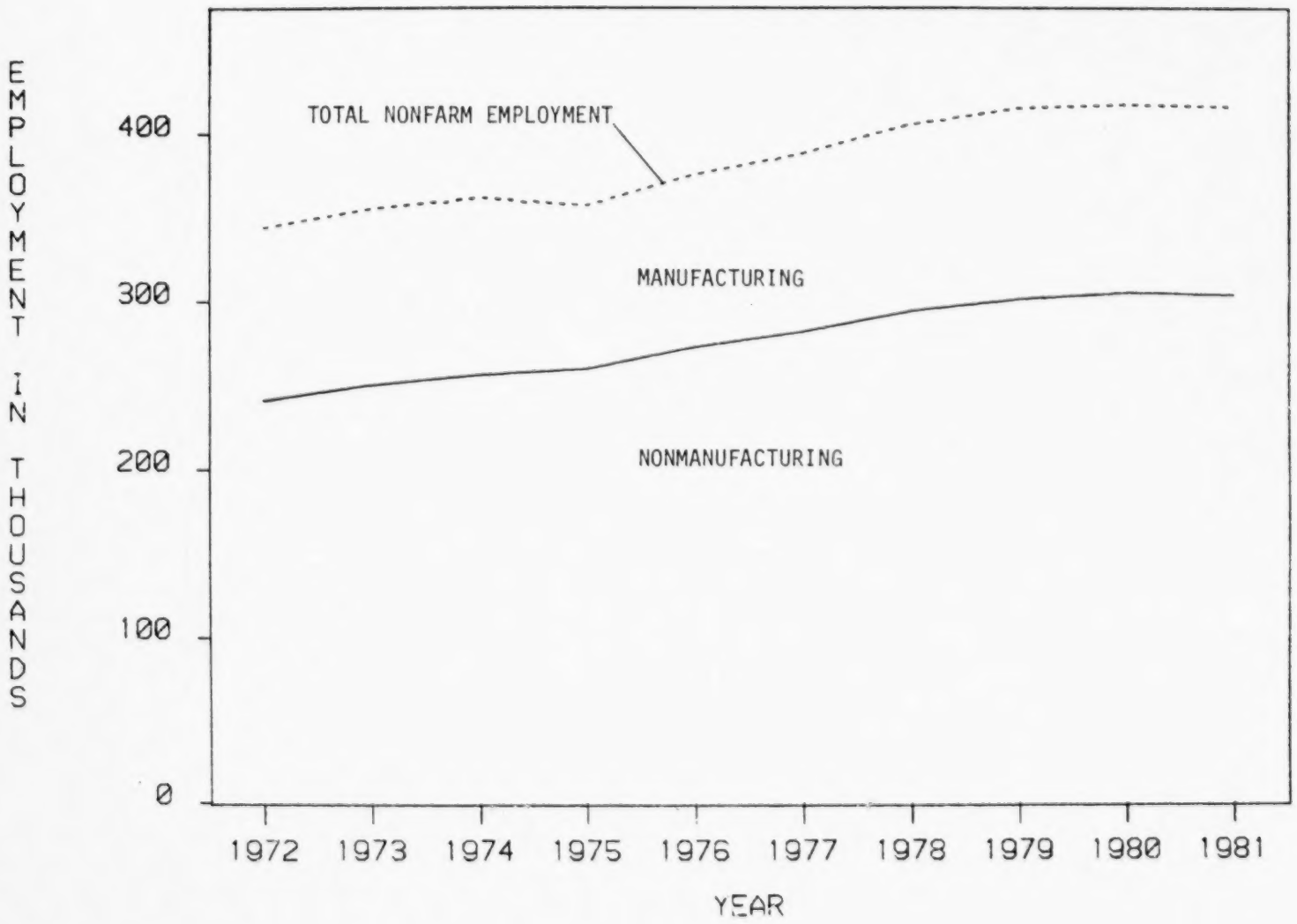


FIGURE 10

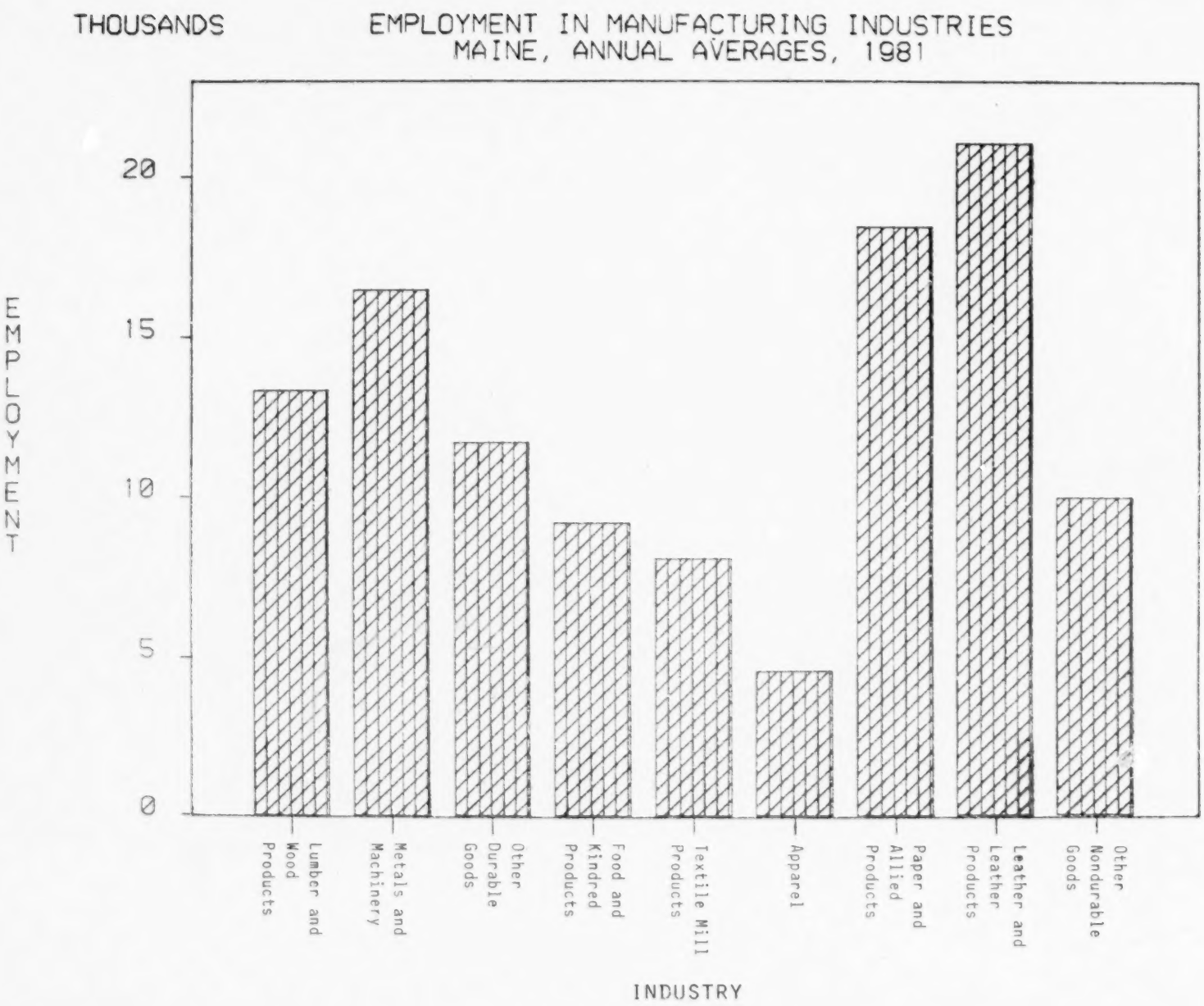

THOUSANDS
EMPLOYMENT IN MANUFACTURING INDUSTRIES
MAINE, ANNUAL AVERAGES, 1981
EMPLOYMENT
20
15
10
5
0
Lumber and Wood Products
Metals and Machinery
Other Durable Goods
Food and Kindred Products
Textile Mill Products
Apparel
Paper and Allied Products
Leather and Leather Products
Other Nondurable Goods
INDUSTRY

FIGURE 11

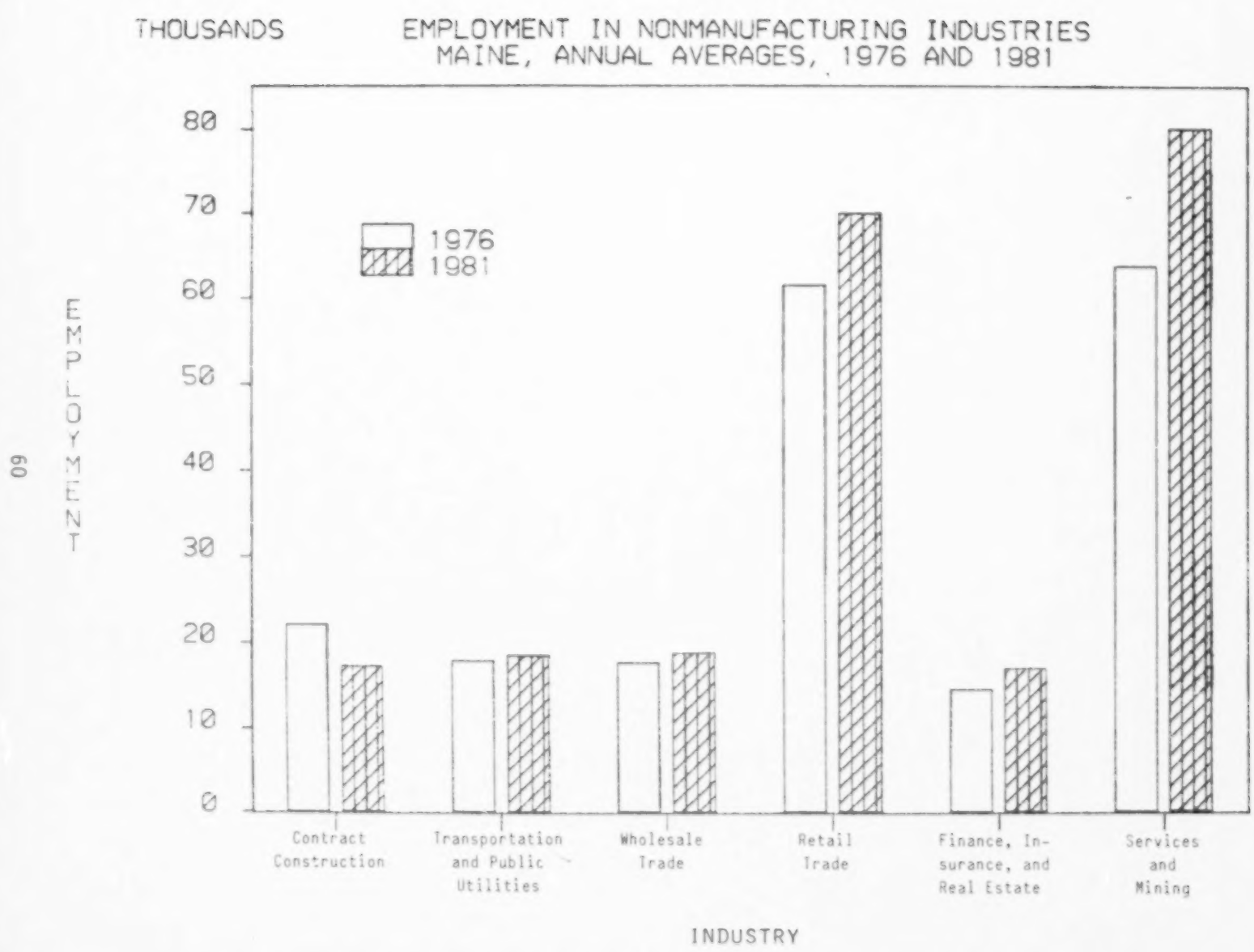
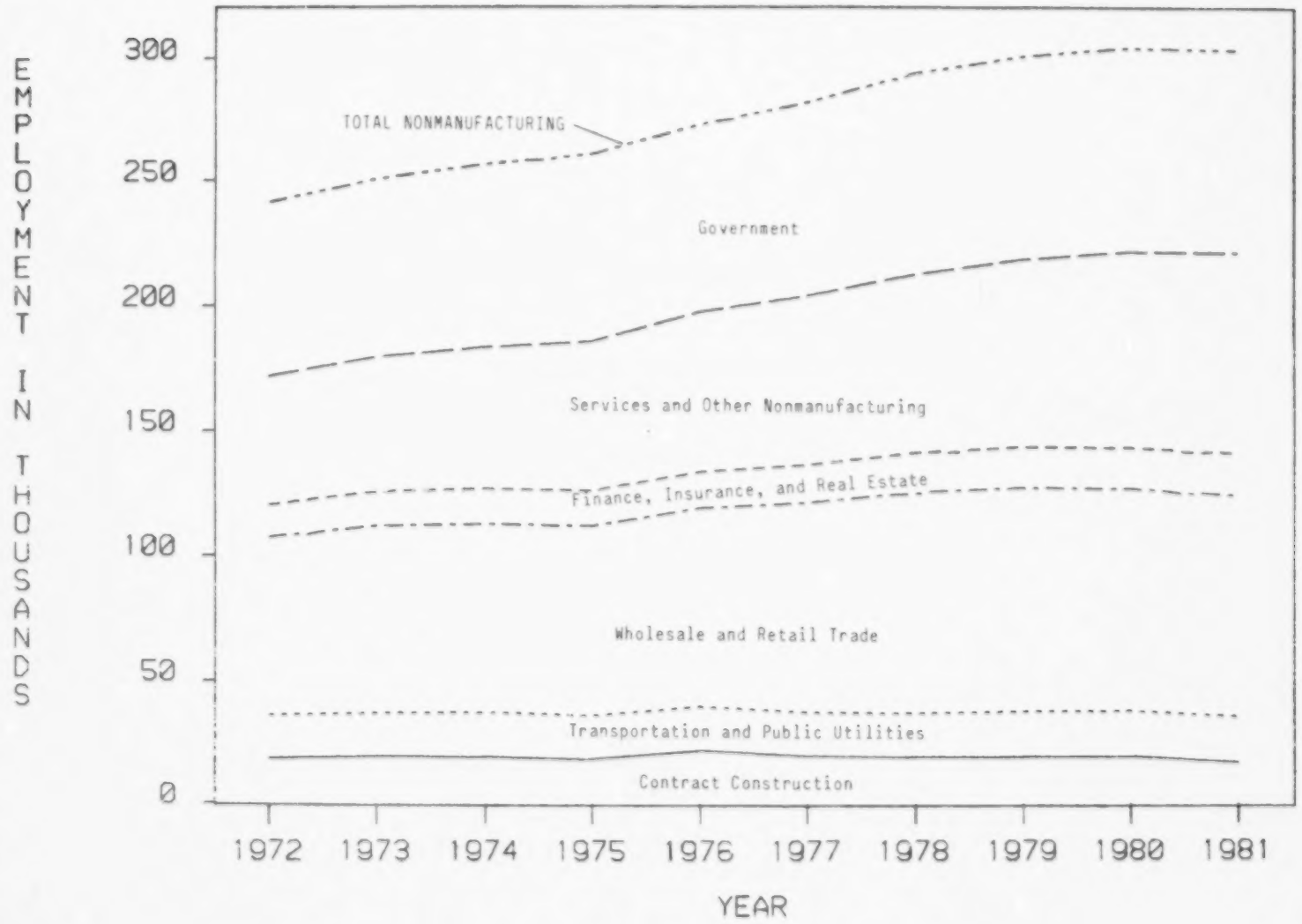

THOUSANDS
EMPLOYMENT IN NONMANUFACTURING INDUSTRIES
MAINE, ANNUAL AVERAGES, 1976 AND 1981
80
70
60
50
40
30
20
10
0
1976
1981
EMPLOYMENT
Contract Construction
Transportation and Public Utilities
Wholesale Trade
Retail Trade
Finance, Insurance, and Real Estate
Services and Mining
INDUSTRY

FIGURE 12

NONMANUFACTURING EMPLOYMENT BY MAJOR INDUSTRY DIVISION
MAINE, 1972-1981



SEASONALITY IN THE MAINE ECONOMY

Several of the major industries in Maine are inherently seasonal in nature. An understanding of this seasonality is an important prerequisite for the informed planning of employment and training programs. Table 26 details nonfarm wage and salary employment by industry and by month for 1981. During 1981 total nonfarm wage and salary employment varied from a low of 405,400 in February to a high of 432,600 in August. Most of the variation occurred in nonmanufacturing industries. Manufacturing employment ranged from 110,100 in December to 117,400 in August. Employment in nonmanufacturing industries varied from 292,600 in February to 317,000 in July. Following is a discussion of the most seasonal industries.

Employment in the lumber and wood products industry ranged from 12,100 in April to 13,900 in August. The spring mud season slows this industry as many areas where wood is harvested become inaccessible to heavy equipment.

During 1981 employment in the food and kindred products industry varied from a statewide total of 8,300 in November and December to 10,700 in August. Many factors contribute to seasonality in this industry. Several crops, especially garden vegetables and blueberries, are available for processing over a very short season. Potato processing plants in Aroostook County typically lay off workers during the summer months as the stock of potatoes from the prior year's crop becomes exhausted. Employment rebounds with the fall harvest. During the winter months the processing of fish is slowed as the catch becomes appreciably lower.

Summer shutdowns are an important factor in the leather and leather products industry. These shutdowns normally last one or two weeks. During 1981 employment in this industry fell from 22,200 in June to 18,800 in July.

Within the nonmanufacturing industries, construction exhibits a relatively high degree of seasonality. During 1981 employment in construction varied from 13,800 in February to 19,700 in July. Most of this fluctuation is due to the slowdown of road and housing construction during the winter months. As an annual average for 1981, unemployed construction workers accounted for 19 percent of Maine's unemployment insurance claimants. This percentage ranged from 10.8 in October to 31.5 in February. During the winter months of January, February, and March, construction workers consistently comprised a large portion of the unemployment insurance claimants.

During 1981 employment in transportation and public utilities varied from 17,900 in February and December to 19,500 in August. Employment by transportation companies increases during the summer months as more goods need to be moved to serve Maine's larger summer population.

Wholesale and retail trade industries, bolstered during the summer by tourism, recorded 1981 employment that varied from 82,400 in February

to 94,600 in July. The summer increase in trade is experienced by year-round businesses as well as restaurants and novelty shops which open for the summer season only.

The services industries also benefit from summer tourism. During 1981 employment in services and mining ranged from 76,500 in February to 87,700 in July. Among the services industries recording seasonal shifts are hotels and motels, motion pictures, amusement and recreation services, museums, art galleries, and membership organizations.

Agriculture is a major source of seasonality in the State economy. During 1981 agricultural employment varied from approximately 13,300 during January, February, and March to over 34,000 during September. Agricultural employment is highest during the fall when potatoes and apples are harvested.

Many self-employed individuals in Maine partake in seasonal activities. Carpentry and other construction skills are often provided by the self-employed. Much of the clamming and fishing is done by people working for themselves. During recent years the cutting and selling of hardwood for home heating has become a growing source of self-employment.

TABLE 26

REVISED ESTIMATES OF NONFARM EMPLOYMENT IN MAINE 1981 1/

(In thousands)

Developed by the Maine Department of Labor in cooperation with the United States Bureau of Labor Statistics

Industry	Annual Average	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Total Nonfarm Wage and Salary Employment	417.1	406.7	405.4	406.2	412.0	417.7	430.1	427.5	432.6	422.2	419.1	413.9	412.3
Total Manufacturing	112.0	112.8	112.8	111.9	112.3	113.1	115.6	110.5	117.4	114.5	112.2	110.5	110.1
Durable Goods	41.4	41.0	41.0	40.5	40.0	40.6	42.4	41.8	42.7	42.5	41.7	40.9	41.4
Lumber and Wood Products	13.3	13.8	13.7	13.1	12.1	12.4	13.8	13.8	13.9	13.7	13.2	12.7	13.1
Metals and Machinery	16.4	16.3	16.2	16.1	16.2	16.3	16.5	16.0	16.6	16.6	16.5	16.4	16.6
Other Durable Goods	11.7	10.9	11.1	11.3	11.7	11.9	12.1	12.0	12.2	12.2	12.0	11.8	11.7
Nondurable Goods	71.4	71.8	71.8	71.4	72.3	72.5	73.2	68.7	74.7	72.0	70.5	69.6	68.7
Food and Kindred Products	9.2	9.4	9.4	9.2	9.4	9.2	8.8	9.4	10.7	9.6	9.3	8.3	8.3
Textile Mill Products	8.1	8.1	8.2	8.0	8.6	8.7	8.7	7.4	8.2	8.1	7.8	7.7	7.6
Apparel	4.6	4.7	4.6	4.6	4.5	4.6	4.6	4.1	4.7	4.7	4.7	4.8	4.8
Paper and Allied Products	18.4	18.3	18.3	18.3	18.6	18.3	18.7	18.9	18.8	18.5	18.0	18.0	18.0
Leather and Leather Products	21.1	21.5	21.7	21.6	21.6	21.9	22.2	18.8	22.0	20.9	20.7	20.5	20.0
Footwear, except Rubber	17.6	18.1	18.4	18.4	18.1	18.3	18.6	15.5	18.4	17.2	17.1	17.0	16.7
Other Leather Products	3.5	3.4	3.3	3.2	3.5	3.6	3.6	3.3	3.6	3.7	3.6	3.5	3.3
Other Nondurable Goods	10.0	9.8	9.6	9.7	9.6	9.8	10.2	10.2	10.3	10.2	10.0	10.3	10.0
Total Nonmanufacturing	304.3	293.9	292.6	294.3	299.7	304.6	314.5	317.0	315.2	307.7	306.9	303.4	302.2
Contract Construction	17.3	15.1	13.8	14.1	16.3	18.2	19.5	19.7	19.3	19.3	18.6	17.4	16.3
Transportation and Public Utilities	18.5	18.2	17.9	18.0	18.2	18.6	19.3	19.4	19.5	18.8	18.5	18.1	17.9
Wholesale and Retail Trade	88.7	83.6	82.4	82.8	86.9	89.9	93.7	94.6	94.4	90.7	89.0	87.6	88.6
Finance, Insurance, and Real Estate	17.0	16.5	16.5	16.5	16.8	16.9	17.3	17.5	17.5	17.2	17.2	17.1	17.2
Services and Mining	80.2	76.6	76.5	76.7	77.7	79.2	82.8	87.7	87.3	81.6	79.9	78.1	77.8
Government	82.6	83.9	85.5	85.2	83.8	81.8	81.9	78.1	77.2	80.1	83.7	85.1	84.4
Federal	17.8	17.6	17.6	17.5	17.6	17.7	17.8	18.1	17.9	17.8	17.9	18.1	18.1
State and Local 2/	64.8	66.3	67.9	67.7	66.2	64.1	64.1	60.0	59.3	62.3	65.8	67.0	66.3

1/ Data presented exclude domestics in private households, proprietors, self-employed, and unpaid family workers. Employment figures relate to full- and part-time wage and salary workers in pay periods including the 12th of the month. Figures are rounded to the nearest hundred. Estimates are based on the 1972 Standard Industrial Classification.

2/ Regular teachers are included in the summer months whether or not specifically paid in these months.

Note: Estimates presented in this table, correcting those previously issued, are based upon a revised benchmark and more complete returns from employers.

2/82

WAGES AND LABOR TURNOVER OF PRODUCTION WORKERS IN MAINE MANUFACTURING INDUSTRIES

The hourly wage paid to production workers in Maine manufacturing industries averaged $6.66 during 1981. The average hourly wage varied from a low of $4.97 in apparel to a high of $9.27 in paper and allied products.

Between 1976 and 1981 the average hourly wage of production workers in manufacturing industries increased from $4.16 to $6.66, or by 60.1 percent. During that same period the consumer price index increased by 59.1 percent. Wages for production workers in manufacturing more than kept pace with inflation. The 1976-1981 percentage increase in average hourly wages varied from a low of 49.4 percent for the textile mill products industry to a high of 67.9 percent for the paper and allied products industry.

Table 28 lists accession rates and separation rates for Maine manufacturing industries for 1980 and 1981. Quits, which averaged 2.2 per 100 workers during 1980, fell to 1.7 per 100 workers during 1981. This decline would be expected during a recessionary period when people are more hesitant to quit their jobs. The quit rates varied from 0.6 per 100 workers for paper and allied products to 2.8 per 100 workers for leather and leather products and textile mill products. Quit rates have always been low in paper and allied products because of the high wages, good benefits, and relatively desirable working conditions.

Layoffs of production workers in manufacturing industries averaged 2 per 100 workers during both 1980 and 1981. The layoff rate was highest (6.7 per 100 workers) during 1981 for the food and kindred products industry. This would be expected because of the high degree of seasonality in that industry.

TABLE 27

ANNUAL AVERAGE WORKWEEK AND HOURLY AND WEEKLY EARNINGS OF PRODUCTION WORKERS EMPLOYED IN MANUFACTURING INDUSTRIES IN MAINE, 1976-1981 1/

Industry	Average Workweek (Hours)			Average Hourly Earnings			Average Weekly Earnings		
	1976	1977	1978	1976	1977	1978	1976	1977	1978
Total Manufacturing.....	39.9	39.8	40.2	$4.16	$4.52	$4.91	$165.98	$179.90	$197.38
Durable Goods.....	40.1	40.8	41.1	4.38	4.77	5.13	175.64	194.62	210.84
Lumber and Wood Products.....	39.0	40.1	40.6	4.24	4.60	5.02	165.36	184.46	203.81
Metals and Machinery.....	40.7	40.6	41.2	4.28	4.64	4.92	174.20	188.38	202.70
Other Durable Goods.....	41.3	42.4	41.7	4.70	5.29	5.63	194.11	224.30	234.77
Nondurable Goods.....	39.8	39.4	39.8	4.05	4.39	4.79	161.19	172.97	190.64
Food and Kindred Products....	36.8	35.8	36.9	3.64	3.92	4.25	133.95	140.34	156.83
Textile Mill Products.....	40.9	40.3	40.3	3.46	3.74	4.03	141.51	150.72	162.41
Apparel.....	36.2	36.2	36.4	3.28	3.53	3.83	118.74	127.79	139.41
Paper and Allied Products....	46.3	46.2	46.1	5.52	6.13	6.71	255.58	283.21	309.33
Leather and Leather Products.	36.7	36.2	36.9	3.30	3.56	3.88	121.11	128.87	143.17
Other Nondurable Goods.....	38.3	38.7	38.9	3.68	3.94	4.25	140.94	152.48	165.33

Industry	Average Workweek (Hours)			Average Hourly Earnings			Average Weekly Earnings		
	1979	1980	1981	1979	1980	1981	1979	1980	1981
Total Manufacturing.....	40.1	40.0	40.4	$5.42	$6.00	$6.66	$217.34	$240.00	$269.06
Durable Goods.....	40.7	40.3	40.6	5.61	6.27	6.97	228.32	252.68	282.98
Lumber and Wood Products.....	40.3	39.8	40.3	5.49	6.08	6.52	221.25	241.98	262.76
Metals and Machinery.....	40.8	40.2	40.2	5.27	5.87	6.61	215.02	235.97	265.72
Other Durable Goods.....	41.0	41.0	41.5	6.26	7.09	7.98	256.66	290.69	331.17
Nondurable Goods.....	39.7	39.8	40.2	5.31	5.85	6.48	210.81	232.83	260.50
Food and Kindred Products....	38.0	36.9	38.2	4.65	5.01	5.50	176.70	184.87	210.10
Textile Mill Products.....	40.7	40.3	40.9	4.40	4.79	5.17	179.08	193.04	211.45
Apparel.....	36.5	36.9	37.3	4.15	4.49	4.97	151.48	165.68	185.38
Paper and Allied Products....	46.1	45.7	46.4	7.44	8.31	9.27	342.98	379.77	427.35
Leather and Leather Products.	35.8	37.0	36.6	4.23	4.72	5.10	151.43	174.64	186.66
Other Nondurable Goods.....	38.9	38.7	39.4	4.80	5.23	5.75	186.72	202.40	226.55

1/ Based on data relating to mid-month weekly pay periods.

Source: Maine Department of Labor, Bureau of Employment Security, Division of Economic Analysis and Research.

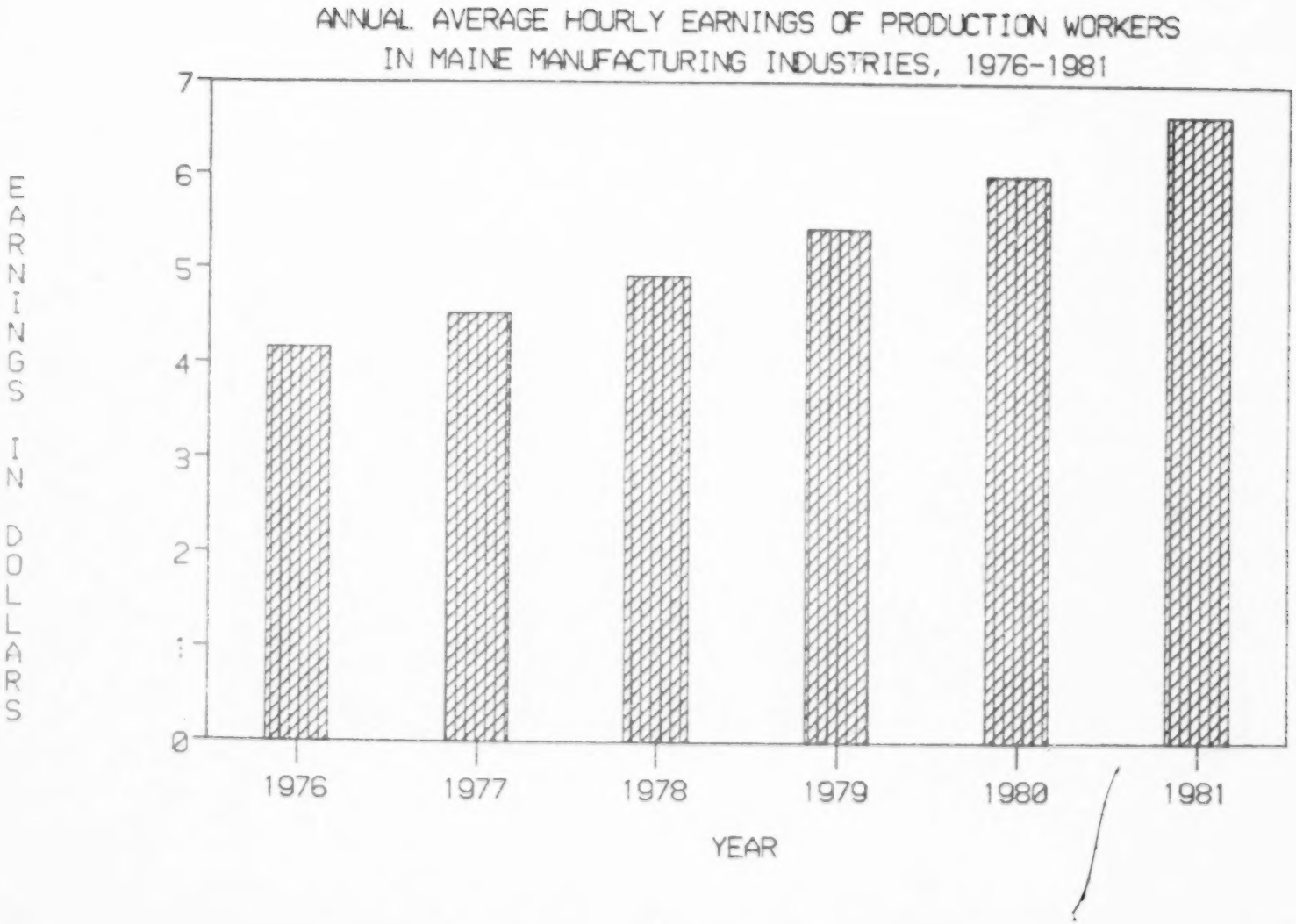
TABLE 28

LABOR TURNOVER RATES OF PRODUCTION WORKERS IN MAINE MANUFACTURING INDUSTRIES
1980 AND 1981
(per 100 employees)

Industry Group	Accession Rates						Separation Rates					
	Total		New Hires		Recalls		Total		Quits		Layoffs	
	1980	1981	1980	1981	1980	1981	1980	1981	1980	1981	1980	1981
Total Manufacturing.....	4.7	4.1	3.3	2.7	1.2	1.1	5.1	4.5	2.2	1.7	2.0	2.0
Durable Goods.....	3.5	3.6	2.2	2.3	1.0	0.9	4.1	3.5	1.6	1.3	1.6	1.4
Lumber and Wood Products.....	6.0	5.6	3.0	3.1	2.5	1.9	6.6	6.4	2.2	2.1	3.3	3.2
Metals and Machinery.....	2.7	2.5	2.0	1.8	0.3	0.3	3.2	2.3	1.6	1.1	0.7	0.6
Other Durable Goods.....	2.1	2.8	1.5	2.1	0.5	0.6	2.4	2.1	0.9	0.9	1.0	0.7
Nondurable Goods.....	5.4	4.4	3.9	2.9	1.3	1.3	5.7	5.0	2.6	2.0	2.2	2.3
Food and Kindred Products.....	9.5	7.3	5.6	4.2	3.8	3.1	10.4	9.5	3.1	2.1	6.3	6.7
Textile Mill Products.....	5.3	5.5	3.5	3.8	1.5	1.2	6.8	6.0	3.4	2.8	2.5	2.3
Apparel.....	4.8	3.9	4.1	3.2	0.6	0.6	4.2	3.6	2.7	2.1	0.8	0.7
Paper and Allied Products.....	1.5	1.5	1.0	0.9	0.2	0.2	1.6	1.8	0.6	0.6	0.4	0.6
Leather and Leather Products...	7.2	5.7	6.0	3.9	1.0	1.7	7.4	6.4	4.1	2.8	2.3	2.7
Other Nondurable Goods.....	4.6	3.7	3.4	2.6	1.2	0.8	4.8	3.9	2.2	1.9	1.6	1.4

Source: Maine Department of Labor, Bureau of Employment Security, Division of Economic Analysis and Research.

FIGURE 13


ANNUAL AVERAGE HOURLY EARNINGS OF PRODUCTION WORKERS
IN MAINE MANUFACTURING INDUSTRIES, 1976-1981
EARNINGS IN DOLLARS
7
6
5
4
3
2
1
0
1976
1977
1978
1979
1980
1981
YEAR

LEADING INDUSTRIES FOR JOB OPPORTUNITIES

Table 29 presents an industry-indicator matrix showing employment and employment-related factors for the 44 largest nonfarm industries in Maine. During 1981 these industries accounted for more than 73 percent of all private nonfarm employment in the State. The industries selected for the matrix were those with annual average employment of 1,000 or more in 1981. All industry titles are from the 1972 Standard Industrial Classification Manual.

The purpose of this matrix is to provide a basis for evaluating industries in terms of their potential for future job openings and placement. Each industry was ranked, relative to the other industries, in each employment-related category. These rankings were then added, and the resulting composite index was used to determine the final rank order for all industries. The seven criteria used in the matrix, and the reasons why they were chosen, are listed below.

1. 1981 Employment. Those industries with the largest 1981 employment received the highest rankings in this category. An industry with large employment was considered a good source of opportunity because of the number of positions. Normal attrition can be expected to provide numerous openings in the larger industries.

2. Net Employment Change, 1976-1981. Industries showing growth since 1976 were considered potential sources of future growth and increased job opportunities. Those industries with the greatest net change in employment received the highest rankings.

3. Percent Employment Change, 1976-1981. This measure gives more weight to those industries with smaller volumes of employment, but whose rapid growth in employment indicates good possibilities for job openings.

4. Net and Percent Changes in Employment, 1980-1981. These two columns were included primarily to identify more recent trends in employment growth. The size of these changes is not as important as their direction. For example, building materials, general merchandise, and food stores all showed positive employment growth between 1976 and 1981, but all declined over the last year. Such a loss could indicate only a temporary decline in a growing industry, or a real reversal in growth. An understanding of the industry would be necessary to correctly interpret these short-term changes.

   The reader should be aware, while evaluating industries on the matrix, that total nonfarm wage and salary employment decreased between 1980 and 1981. Therefore an industry may show only a very small employment gain and still be a viable source of future employment.

5. Number of Firms, 1981. The number of firms in an industry was considered important because more firms represent a broader employment base. Industries with numerous firms can be expected to provide many different work situations for potential employees, including a more geographically dispersed availability of openings.

6. Average Weekly Wages, 1981. Industries with higher weekly wages were regarded as sources of more desirable jobs. Wages considered were second quarter 1981 average weekly wages for private firms covered under the Maine Employment Security Law.

7. Claimants as a Percent of Employment. This measure of Unemployment Insurance (UI) claimants was included as a measure of the stability of employment in the respective industries. UI claimants are classified according to the industry from which they were separated. Industries with the lowest ratios of claimants to employment were accorded the highest rank orderings.

Caution should be exercised when using the matrix to determine the best industries in terms of future job openings and placement. The matrix is not intended to be an absolute guide, but one means by which employment program planners may decide which industries have potential for job openings. Good job development opportunities depend upon specific employers, specific occupations, and specific prospects relating to an individual firm. As a general framework, the industry-indicator matrix is a useful tool. However, it should not be rigidly adhered to in the search for job development opportunities. At its best the matrix is a sensible guide to where most, not all, of the desirable employer contacts can be made.

Following is a discussion of the top 20 industry groups appearing on the matrix and of specific employment changes within those groups. Annual average employment estimates were used for the larger industry groups which make up the industrial matrix. However, 1981 annual averages are not yet available for the specific industries within these groups. Therefore, to provide a more detailed analysis of employment changes for individual industries, comparisons have been made between second quarter employment averages in 1976 and 1981.

Health Services

Health services received the highest ranking on the industry-indicator matrix. In 1981 it employed more workers than any other industry group, had a large number of firms, and had a very low ratio of UI claimants to employment. This industry also evidenced the greatest net growth between both 1976-1981 and 1980-1981. Although wages in health services continue to be relatively low, strong demand for health service workers, particularly in key occupations, may increase the industry-wide wage.

Employment in dentists' and doctors' offices increased by 290 and 610, respectively, between 1976 and 1981. Hospitals added nearly 3,800 work

ers, while nursing and personal care facilities employment grew by 2,890. Geographically, health services employment in 1981 was concentrated in those counties with the greatest populations, namely, Androscoggin, Cumberland, Penobscot, and York. Health services can be expected to provide continuing employment opportunities due to both replacement demand and future growth.

Transportation Equipment

Ranked second on the matrix, transportation equipment manufacturing firms recorded impressive growth between 1976 and 1981. Employment increased from 4,800 to 8,900 workers, or by 85.4 percent. In 1981, the relatively small number of firms in this industry paid above average wages, and had a very favorable ratio of UI claimants to employment.

Within transportation equipment, motor vehicles and equipment firms declined by 500 workers between 1976 and 1981. On the other hand, employment in aircraft and shipbuilding firms increased by 4,190, or 99.7 percent. Nearly 89 percent of the employment in this industry is located in Sagadahoc and York counties, where Bath Iron Works and Pratt and Whitney Aircraft are the largest employers.

Miscellaneous Retail Trade

The miscellaneous retail trade group, ranked third on the matrix, includes such industries as drug, liquor, sporting goods, and jewelry stores, as well as florists, fuel oil dealers, and mail order houses. It was ranked high on the matrix because of large employment, many firms, and above average employment growth. Weekly wages for this industry were below average, most likely due to the number of part-time workers.

The most substantial growth between 1976 and 1981 was found in the industry including sporting goods, book, jewelry, and gift stores, which increased by 950 workers, or 43.1 percent. Drug stores also grew (+320), but fuel and ice dealers showed a small loss of 180. Cumberland, Kennebec, and Penobscot counties were the largest employment centers for the miscellaneous retail trade group.

Business Services

Business services ranked high on the matrix because of its large size (6,000 workers) and its particularly impressive growth of 2,500, or 71.4 percent, between 1976 and 1981. Most 1981 employment was found in research, management, detective, and other miscellaneous services firms, which accounted for 54.7 percent of the total. These firms also provided most of the long-term growth in the industry, increasing by 1,400 workers, or by 77.3 percent. The building cleaning and maintenance industry added 200 new employees between 1976 and 1981. Other types of industries in this group include advertising, credit collection, and data processing. Most business services employment is found in Cumberland County, with smaller concentrations in Kennebec and Penobscot.

Printing and Publishing

Ranked fifth on the industry-indicator matrix, printing and publishing recorded a gain of 700 workers between 1976 and 1981, increasing to a level of 3,800. This industry group had a moderate number of firms in 1981, an above average weekly wage, and a low ratio of claimants to employment.

Newspaper printing, while employing the largest share of workers, increased by only 220, or 10.9 percent between 1976 and 1981. A more substantial gain occurred in the commercial printing industry with an increase of 500 workers, or 72.1 percent. The 1981 employment was concentrated in Androscoggin, Kennebec, Penobscot and Cumberland counties.

Legal Services

During 1981 there were 2,100 persons employed in 535 legal services firms. Between 1976 and 1981 employment in this relatively small industry grew by 600, an impressive 40 percent. The industry also grew by 100, or 5 percent between 1980 and 1981, and in 1981 had a very low ratio of UI claimants to employment. Wages listed in the matrix are lower than might be expected for the legal profession, since most lawyers are self-employed and their wages are not included in the figures used. Employment concentrations are found in Cumberland, Penobscot, and York counties.

Banking

Banking has long been considered one of the most stable industry groups in Maine. One indication of this is the low ratio of UI claimants to employment. In 1981 banking had only 0.8 UI claimants separated from the group for every 100 employees. This ratio was the lowest on the matrix. While Cumberland County had the most banking employment, Androscoggin, Aroostook, Kennebec, Penobscot, and York counties also accounted for large numbers of bank workers.

Employment in banking stood at 7,000 in 1981, having recorded moderate growth of 1,300 above the 1976 level and 200 above the level for 1980. Wages in this industry were slightly below average. In 1981 over 72 percent of banking employment was found in commercial and stock savings banks, which had grown by 500 workers (10.6 percent) since 1976. Mutual savings banks recorded more impressive growth, increasing by 730 workers, or 63 percent, between 1976 and 1981.

Wholesale Trade-Nondurable Goods

This industry group includes the wholesale trading of paper, drugs, farm products, groceries, and other nondurable goods. This group was ranked eighth because of large employment and number of firms, and strong growth between 1980 and 1981.

Nearly half of the 1981 employment in this industry group was in the groceries and related products industry, which grew by 520 over the five-year period. Small gains were also evidenced by drugs, proprietaries, and sundries firms and by those in miscellaneous nondurable goods. Understandably, employment in petroleum and petroleum products wholesaling declined over the period. Androscoggin, Aroostook, Cumberland, Kennebec, and Penobscot recorded the largest concentrations of employment in this industry group.

Paper and Allied Products

The paper industry in Maine has always been a leading employer. In 1981 it employed 18,400 people, and averaged 380 workers per firm. The 1981 employment level was the result of relatively small growth of 1,100, or 6.4 percent, between 1976 and 1981.

Employment in 1981 was concentrated in paper mills, which employed 82.4 percent of total employment in the paper and allied products industry. Paper mills employment increased by 890, or 6.2 percent since 1976. Firms manufacturing envelopes, stationery, and pressed and molded pulp products declined by 190 workers, or 13.3 percent. Wages paid in the paper and allied products industry group were the highest listed on the matrix. Employment of over 1,000 in 1981 was found in Aroostook, Cumberland, Franklin, Hancock, Kennebec, and Oxford counties, and over 5,000 worked in Penobscot County.

Electrical and Electronic Equipment

The 47 firms engaged in the manufacture of electrical and electronic equipment employed 7,800 workers in 1981. Between 1976 and 1981 employment grew by 2,600, or 50 percent. Growth slowed in the last year with a gain of only 100 workers, or 1.3 percent. Reflecting this slow growth, 1981 UI claimants were 4.7 percent of employment. Wages in this industry group were average compared to others on the matrix.

Long-term growth in employment occurred primarily in two industries. Electric distributing equipment increased by 380 workers, or 40 percent, and electronic components and accessories employment recorded an impressive gain of 1,830, or 70.5 percent. Cumberland and York were the only counties with substantial 1981 employment in this industry group.

Miscellaneous Services

This industry group is made up of nearly 500 firms providing engineering, architectural, research, accounting, and other professional services. These firms, employing 3,300 in 1981, registered long-term growth of 600, or 22.2 percent. Growth was slower between 1980 and 1981, but the ratio of UI claimants to employment remained low in 1981. Wages paid in 1981 were high compared to other groups listed on the matrix. Only Cumberland County showed significant 1981 employment in miscellaneous services.

Eating and Drinking Places

Eating and drinking places are very popular in Maine, with over 1,700 establishments located throughout the State. Total employment of 19,800 in 1981 was the third largest of the industry groups on the matrix, but average employment per firm, because of the many firms, was only 11.4 workers. While all 16 counties had eating and drinking places employment, the more populous counties (Androscoggin, Cumberland, Kennebec, Penobscot, and York) had the largest shares.

Employment in eating and drinking places grew by 3,900, or 24.5 percent, between 1976 and 1980. However, 1981 employment remained constant at the 1980 level.

As discussed in a previous section, this industry group experiences a high degree of seasonality, primarily related to the summer tourist season. During 1981, employment ranged from 16,100 in February to 24,500 in July. Because of this seasonal fluctuation, as well as the lack of growth between 1980 and 1981, UI claimants were 6 percent of 1981 employment. Wages listed for eating and drinking places were the lowest on the matrix, because of part-time employment and the exclusion of tips from the wage data used.

Leather and Leather Products

The leather and leather products industry group has long been a very important part of Maine's economy. It was ranked thirteenth on the matrix primarily due to large employment, moderate growth between 1976 and 1981, and the second largest net growth between 1980 and 1981. The number of UI claimants in this group was large, equal to 14.5 percent of 1981 employment.

Within the leather and leather products industry group, the manufacture of nonrubber footwear accounted for the most workers, 83.9 percent of the total. This industry increased by 1,470 between 1976 and 1981, or by 8.7 percent. The leather tanning and finishing industry lost 140 workers over the period, while the number of workers making boot and shoe cut stock increased by 100. Most 1981 employment was found in Androscoggin, Penobscot, and York counties, with smaller concentrations in Cumberland, Franklin, Oxford, and Somerset.

Food Stores

Food stores in 1981 employed 14,100 persons in over 1,300 firms. Over 90 percent of these workers were in grocery stores, with the rest employed by meat, fruit, candy, and dairy products stores, and retail bakeries. Between 1976 and 1981, food stores employment increased by 2,500, or 21.6 percent. However, between 1980 and 1981 there was a loss of 200 workers, or 1.4 percent. Average wages in the industry group were relatively low, primarily due to the large number of part-time workers. Employment in food stores was concentrated in Androscoggin, Cumberland, Kennebec, Penobscot, and York counties.

Apparel and Accessory Stores

Apparel and accessory stores were ranked fifteenth on the matrix. This industry group employed 3,500 workers in 508 firms during 1981, and registered good short- and long-term growth in employment. Wages were relatively low due in part to many employees working only part-time. Also, this industry employs primarily sales and clerical staff and has few higher-paid professional employees.

Employment in 1981 was almost equally divided between women's ready-to-wear stores and family clothing stores. Of the two, family clothing stores showed more impressive growth of 170, or 21.5 percent between 1976 and 1981. Most employment was found in Cumberland and Penobscot counties.

Wholesale Trade - Durable Goods

Ranked sixteenth, this group employed 9,200 workers in 1981, an increase of 500 over 1976, but lower than the 1980 level of 9,400. Most firms engaged in the wholesale trading of durable goods were small, averaging only 8 workers in each of the 1,200 firms. Wages in this industry group were relatively high at $310 per week. Because of the loss of employment between 1980 and 1981, UI claimants separated from this group in 1981 were 4.3 percent of employment.

Employment in wholesaling of hardware, plumbing, and heating equipment increased by 260, or 22.1 percent, between 1976 and 1981. Motor vehicles and automotive equipment wholesaling employment declined over the period by 4.3 percent. Cumberland and Penobscot were the larger employment centers for the wholesale trade-durable goods industry group.

Credit Agencies Other Than Banks

Employment in credit agencies other than banks was 1,200 in 1981, an increase of 100 over the 1,100 workers in both 1976 and 1980. This slight increase actually represented growth of 9.1 percent over both the short- and long-term period. Personal credit institutions, accounting for 61 percent of 1981 employment in this group, grew only 3.8 percent between 1976 and 1981. Savings and loan associations, accounting for 34 percent of credit agencies employment, grew 32.9 percent over that period. Most employment was found in Cumberland County, with lesser numbers in Androscoggin and Kennebec.

Hotels and Other Lodging Places

Employment in hotels and other lodging places stood at 6,200 in 1981, an increase of 400 over 1976 and 200 over 1980. There were 843 establishments in 1981 and UI claimants were 7.2 percent of employment. The high claimants figure is primarily due to the seasonality of this industry. Many who work during the summer tourist season are unable to find jobs at other times of the year. Wages paid in this industry are relatively low, because of part-time and seasonal employment, and the exclusion of tips

from the calculation of the average wages. Maine's more southern counties, Cumberland and York, accounted for the largest share of employment in hotels and other lodging places.

Trucking and Warehousing

Trucking and warehousing recorded slight employment growth of 300 between 1976 and 1981, and no increase between 1980 and 1981. Employment of 4,700 in 1981 was spread throughout 635 firms. The lack of growth and the relatively high percentage of UI claimants was primarily due to rising transportation costs, including equipment and fuel purchases. Average wages in this industry group were relatively high, at $350 per week. Most employment was found in Cumberland and Penobscot counties.

Communication

Communication, ranked twentieth on the matrix, showed no growth between 1980 and 1981, and a gain of only 100 workers over the long term. Total 1981 employment of 5,100 in 113 firms meant a fairly large average of 45 workers per firm. Average wages of over $366 per week were second highest listed on the matrix. The telephone communication industry, with 72 percent of 1981 employment in the communication group, recorded a loss of 150 workers, or 3.9 percent, between 1976 and 1981. Radio and television broadcasting employment grew by 150, an increase of 15.3 percent over the period. Nearly half of the 1981 employment in this industry group was in Cumberland County.

The top twenty industry groups listed on the matrix are those which generally had either substantial employment, more favorable growth rates, good wages, a low ratio of UI claimants to employment, or some combination of these factors. Utilizing the matrix the twenty industries previously discussed were considered the most promising in terms of employment and training program planning. However, the matrix is not intended as an absolute guide. Although an industry receives a poor rank ordering on the matrix, it should not be precluded from consideration on this basis alone.

TABLE 29

MAINE INDUSTRY-INDICATOR MATRIX

Rank Order	Industry Title	SIC	Employment 1/							Number of Firms 1981 2/	Average Weekly Wages 1981 2/	Claimants as a Percent of 1981 Employment 3/	Composite Index 4/
			1981	1980	1976	Change 1976-1981		Change 1980-1981					
						Net	Percent	Net	Percent				
1	Health Services	80	34.7	33.6	26.5	+ 8.2	+30.9%	+ 1.1	+ 3.3%	1,736	$215.30	1.1	55.5
2	Transportation Equipment	37	8.9	8.3	4.8	+ 4.1	+85.4	+ 0.6	+ 7.2	98	346.93	3.3	72.0
3	Miscellaneous Retail	59	10.4	10.0	8.7	+ 1.7	+19.5	+ 0.4	+ 4.0	1,625	180.04	4.3	99.0
4	Business Services	73	6.0	5.6	3.5	+ 2.5	+71.4	+ 0.4	+ 7.1	834	186.48	5.7	101.0
5	Printing and Publishing	27	3.8	3.6	3.1	+ 0.7	+22.6	+ 0.2	+ 5.6	207	332.92	2.8	110.5
6	Legal Services	81	2.1	2.0	1.5	+ 0.6	+40.0	+ 0.1	+ 5.0	535	282.05	1.2	113.0
7	Banking	60	7.0	6.8	5.7	+ 1.3	+22.8	+ 0.2	+ 2.9	271	217.09	0.8	116.5
8	Wholesale Trade-Nondurable Goods	51	9.6	9.3	9.0	+ 0.6	+ 6.7	+ 0.3	+ 3.2	1,015	269.63	5.8	118.0
9	Paper and Allied Products	26	18.4	18.3	17.3	+ 1.1	+ 6.4	+ 0.1	+ 0.5	48	427.64	3.9	129.5
10	Electric and Electronic Equipment	36	7.8	7.7	5.2	+ 2.6	+50.0	+ 0.1	+ 1.3	47	271.98	4.7	129.5
11	Miscellaneous Services	89	3.3	3.2	2.7	+ 0.6	+22.2	+ 0.1	+ 3.1	495	315.49	3.2	129.5
12	Eating and Drinking Places	58	19.8	19.8	15.9	+ 3.9	+24.5	0.0	0.0	1,737	97.20	6.0	131.0
13	Leather and Leather Products	31	21.1	20.1	19.6	+ 1.5	+ 7.7	+ 1.0	+ 5.0	104	221.45	14.5	141.0
14	Food Stores	54	14.1	14.3	11.6	+ 2.5	+21.6	- 0.2	- 1.4	1,318	136.17	3.0	144.0
15	Apparel and Accessory Stores	56	3.5	3.4	3.0	+ 0.5	+16.7	+ 0.1	+ 2.9	508	137.97	3.0	160.0
16	Wholesale Trade-Durable Goods	50	9.2	9.4	8.7	+ 0.5	+ 5.7	- 0.2	- 2.1	1,200	310.03	4.3	163.5
17	Credit Agencies Other Than Banks	61	1.2	1.1	1.1	+ 0.1	+ 9.1	+ 0.1	+ 9.1	209	221.73	2.2	166.5
18	Hotels and Other Lodging Places	70	6.2	6.0	5.8	+ 0.4	+ 6.9	+ 0.2	+ 3.3	843	109.48	7.2	167.0
19	Trucking and Warehousing	42	4.7	4.7	4.4	+ 0.3	+ 6.8	0.0	0.0	635	350.07	7.3	167.0
20	Communication	48	5.1	5.1	5.0	+ 0.1	+ 2.0	0.0	0.0	113	366.57	2.6	172.0
21	Nonelectrical Machinery	35	4.1	4.4	2.6	+ 1.5	+57.7	- 0.3	- 6.8	129	317.96	4.5	173.0
22	General Merchandise Stores	53	8.5	8.6	7.3	+ 1.2	+16.4	- 0.1	- 1.2	418	142.65	4.0	174.5
23	Electric, Gas, and Sanitary Services	49	3.3	3.3	3.2	+ 0.1	+ 3.1	0.0	0.0	152	351.68	1.6	177.0
24	Amusement and Recreation Services	79	2.2	2.1	1.7	+ 0.5	+29.4	+ 0.1	+ 4.8	388	122.51	7.2	179.0
25	Social Services	83	5.9	6.0	4.5	+ 1.4	+31.1	- 0.1	- 1.7	357	155.17	6.7	184.5
26	Apparel and Other Textile Products	23	4.6	4.6	3.7	+ 0.9	+24.3	0.0	0.0	52	205.98	6.3	192.0
27	Personal Services	72	3.3	3.3	3.1	+ 0.2	+ 6.5	0.0	0.0	664	148.53	4.0	196.0
28	Auto Repair, Services, and Garages	75	2.2	2.2	2.0	+ 0.2	+10.0	0.0	0.0	593	215.35	6.0	196.0
29	Miscellaneous Repair Services	76	1.0	1.0	0.8	+ 0.2	+25.0	0.0	0.0	285	250.72	7.9	199.5
30	Fabricated Metal Products	34	4.1	4.3	3.6	+ 0.5	+13.9	- 0.2	- 4.7	108	320.73	9.0	214.0
31	Lumber and Wood Products	24	13.3	13.6	13.6	- 0.3	- 2.2	- 0.3	- 2.2	791	249.14	10.7	219.0
32	Automotive Dealers and Service Stations	55	8.3	8.6	9.6	- 1.3	-13.5	- 0.3	- 3.5	1,290	223.58	6.0	223.0
33	Chemicals and Allied Products	28	1.3	1.4	1.1	+ 0.2	+18.2	- 0.1	- 7.1	32	338.86	6.1	228.5
34	Textile Mill Products	22	8.1	8.1	8.8	- 0.7	- 8.0	0.0	0.0	62	237.97	14.0	233.0
35	Building Materials and Garden Supplies	52	3.4	3.5	3.3	+ 0.1	+ 3.0	- 0.1	- 2.9	492	219.76	7.7	237.0
36	Furniture and Home Furnishings Stores	57	1.9	2.0	2.1	- 0.2	- 9.5	- 0.1	- 5.0	434	206.18	4.2	247.0
37	Special Trades Contractors	17	8.0	8.5	10.7	- 2.7	-25.2	- 0.5	- 5.9	2,092	268.02	25.7	248.0
38	Miscellaneous Manufacturing	39	1.0	0.9	1.2	- 0.2	-16.7	+ 0.1	+11.1	43	195.99	15.8	249.5
39	Rubber and Miscellaneous Plastics Products	30	3.8	3.9	4.2	- 0.4	+ 9.5	- 0.1	- 2.6	37	247.95	8.3	250.5
40	Local and Interurban Passenger Transit	41	1.0	1.0	1.0	0.0	0.0	0.0	0.0	102	131.70	5.3	253.0
41	General Building Contractors	15	5.9	8.1	8.1	- 2.2	-27.2	- 2.2	-27.2	1,231	291.40	25.4	255.5
42	Heavy Construction Contractors	16	3.4	4.4	3.3	+ 0.1	+ 3.0	- 1.0	-14.5	223	318.06	60.4	259.0
43	Food and Kindred Products	20	9.2	10.4	10.1	- 0.9	- 8.9	- 1.2	-11.5	192	231.15	19.2	265.5
44	Stone, Clay, and Glass Products	32	1.1	1.2	1.3	- 0.2	-15.4	- 0.1	- 8.3	73	298.99	23.9	280.0

1/ Maine Department of Labor, Bureau of Employment Security, Division of Economic Analysis and Research. Employment in thousands.

2/ Employment, Wages, and Contributions, ES-202, second quarter 1981, Maine Department of Labor, Bureau of Employment Security, Division of Economic Analysis and Research. Part-time workers are included in these calculations. Tips are not included.

3/ Data relate to claimants filing under the Regular State Unemployment Insurance Program, January 1982.

4/ When two or more industries had the same composite index, the higher rank was given to the one with the larger 1981 employment.

GENERAL OCCUPATIONAL EMPLOYMENT TRENDS

Occupational employment may be affected by the industrial composition of the area, technological innovations, outside competition, and the industrial process in place. In a changing and increasingly complex economy, some occupations become obsolete while new occupations emerge. In many cases, these new occupations require higher levels of education and/or training. However, the market process involving the upgrading of entry-level requirements is not always associated with the changing content of jobs, but is sometimes more reflective of a higher level of education of the younger population from which employers can recruit. As Lester Thurow proposes, most training is on the job. Consequently and increasingly, attention is directed to objectives which are more appropriately termed "training slots" rather than "jobs."

Upon examining the accompanying Maine Occupation-Indicator Matrix, 1980-1985, it becomes apparent that much of the demand for workers will continue to be for secondary-type labor market jobs. However, this is not the case with Maine's durable goods manufacturing industries which are projected to continue to accelerate their demand for workers in primary-type jobs. This includes the industries of transportation equipment, electrical machinery, nonelectrical machinery, and metal products.

Many of the jobs contained in the matrix require more than CETA's standard six months to a year training investment. Specific Vocational Preparation (SVP) codes of up to "seven" are listed, "seven" indicating an occupation requiring a preparation time over two years and up to four years. The rationale behind this inclusion is that although CETA may not train a bricklayer or a systems analyst to competency, CETA can get the participant onto a career track through apprenticeship, on-the-job training (OJT), classroom training, or other type of formal or informal training. As Maine's economy becomes more diversified, industrial change will continue to bring with it an increased demand for more highly trained labor. Concomitant to this change is higher wages.

In addition to an emphasis this year on demand for technical jobs in the primary sector, more secondary sector jobs are listed. We argue that secondary jobs with their barest of qualitative preparation serve as initial jobs for youth through which they gain experience, aspirations, and pocket money while testing the labor market through sporadic attachment. It is further suggested that youth progress through a series of "bridge" jobs, i.e., learning experiences, from the secondary labor market to the primary labor market.

To target relatively scarce primary-type jobs, planners may need to work more closely with job developers to precisely identify not only promising industries but specific firms within these industries. This will help ensure the best possible return on investment of employment and training dollars. Even assuming a continued emphasis on entry-level jobs, this qualitative approach may require a more extended period of training and a

greater commitment per participant in terms of both CETA time and money--particularly if the system is going to successfully address the handicaps of the hard core unemployed.

Statewide, labor demand through the mid-1980s will be most significant in the clerical, technical, trade, and service clusters associated with the following industries:

- health
- finance, insurance, and real estate
- metals
- transportation

According to the Occupational Employment Statistics (OES) survey-based projections, total nonfarm wage and salary employment in Maine is expected to increase by 11.3 percent between 1980 and 1985, moving from 324,517 jobs to 361,188 jobs. The most significant rates of growth will be recorded by the following occupational groups: technical (14.2 percent), professional (12.7 percent), clerical (12.3 percent), and services (12.1 percent).

OCCUPATIONS FOR POTENTIAL TRAINING AND PLACEMENT

The Maine Occupation-Indicator Matrix has been developed for use by planners of employment and training programs. It is intended to serve as a tool which estimates statewide demand in those occupations for which, under the assumptions contained in the matrix, training provided by the public sector is feasible. The matrix presents a likely demand scenario. Absolute value of cell sizes is not the important factor; it is relative position in terms of matrix rank order which warrants attention. Job-linked requirements are seen as equally important considerations. Training time is viewed as a surrogate measure for training cost.

"Occupation" is treated as the dependent variable. The matrix contains eight independent variables. Three are rank ordered; five are not. Often Annual Planning Information (API) reports have combined matrix variables into one composite index. Through amalgamation, a preponderance of high turnover jobs have had a tendency to skew the composite index towards secondary-type labor market jobs such as waiter/waitress, clerk, or delivery truck driver. Consequently, this Statewide API does not use a composite index.

The matrix contains the following variables:

1. Employment within the given occupation in 1980;
2. Employment demand within a given occupation attributable to either growth or separation between the years 1980 and 1985, inclusive;
3. Hourly wage in a given occupation;
4. Specific vocational preparation (SVP) as the amount of time required to train for a given occupation;
5. Physical demands associated with a given occupation;
6. Environmental conditions of a given occupation;
7. Level of language development associated with a given occupation;
8. Level of math development associated with a given occupation.

A total of 124 occupations are listed in the matrix.

Probably the greatest limitation contained in an occupational demand matrix (or any matrix) is a fixed record orientation. Therefore, because of its less-than-interactive nature, a demand matrix should be used in conjunction with other demand and supply labor market knowledge and information. One such source is the Maine Occupational Information Coordinating Committee's (MOICC) Occupational Information System (OIS). As a dynamic easy-to-use tool, OIS lends an element of technological quantification that can be used in conjunction with the experientially-based knowledge of employment and training planners.

Occupations chosen for inclusion in the matrix utilized the following selectors:

1. The occupation has reasonable demand expectations.

2. The occupation is at, or near, entry level; or the occupation can be accessed, over time, through an entry level position.

3. Requisite entry-level training is within the resources of government.

4. The occupation promises economies of scale; general skills are taught which are transferable within a "job cluster"; however, in some cases, labor market reality demands targeting of desirable jobs within specific industries.

5. The data is available.

6. Research and conclusions regarding labor market demand and conditions gleaned from two SETC in-house studies entitled The Maine Metal Products Industry and the Role of Government: Considerations for Policy and Program Development and The Transitioning of AFDC Recipients to Good Jobs in the Labor Force.

7. An additional anticipated demand for defense-related labor to be generated by the current Administration's increased military budget.

Attempts were made to utilize data which examines occupations for seasonality and for occupational-related illness and/or sickness. These efforts were dropped because of the inadequate nature of related data in the current reporting system.

Heavy emphasis was afforded the Bureau of Labor Statistics OES Survey-Based Matrix Projections Program, 1980-1985. As a forecast of labor demand, the survey makes projections by occupation to 1985. All data which deal with levels of employment, whether they be actual, estimates, or forecasts, originated with this source.

Projections of labor demand contained in the BLS matrix are a function of historical employment patterns which are run against time as a proxy for technological change.

Matrix variables were selected and operationalized as explained in Appendix A.

The following discussion is a brief statement of conclusions and caveats concerning the variables contained in the Maine Occupation-Indicator Matrix.

Employment 1980 appears to be a good surrogate measure of general employment opportunities by occupation.

Employment Demand Through Growth, 1980-1985 suggests some qualitative upgrading of industry's demand for labor. As the State's industrial mix continues to transform from a nondurable to a durable orientation, qualitative upgrading of associated labor demand is likely to continue.

One occupation--plumber and/or pipefitter--is contained in the matix even though demand through growth has been negative; demand through separation will continue to be positive. Residential and nonresidential construction is projected to experience an upturn with a subsequent increased demand for plumbers and/or pipefitters. With the anticipated increased commitment to defense contracting, Maine's transportation equipment manufacturers should exhibit a further demand for labor which is not reflected in the numbers contained in the OES-based matrix. This may include plumbers and/or pipefitters, machinists, sheetmetal workers, welders, shipwrights, and shipfitters.

Employment Demand Through Separation, 1980-1985 is estimated to be greater than demand through growth. A high separation rate can be viewed as being either positive or negative; it is viewed here from strictly a quantitative perspective. As a rule of thumb, an occupation with a relatively high separation rate may be a good candidate for short-term work experience. An occupation with a low turnover rate may be a good candidate for long-term career training.

Wages per hour depart significantly from the rank ordering of the above three indicators of demand. As might be expected, the relationship is generally inverse; the lower the hourly wage, as is generally true for semiskilled workers, the greater the demand for their labor.

Specific Vocational Preparation codes do not lend themselves to analysis. They are offered as an objective aid to planners to facilitate decisions concerning the allocation of limited resources; training time is viewed as a proxy measure of cost.

Physical Demands and Environmental Conditions can be used to target pertinent careers for those participants who may have some physical handicap or limitation.

Language Development and Math Development may be used as a template of job-related skills in conjunction with participant levels of preparation. These indicators may be used to identify and to close gaps which may exist between skill requirements and developmental levels.

The variety of occupations for which the public sector can provide training is unevenly distributed in the State. This is also true of total demand. Those counties which fare better on both of these points are those southern and central counties which contain the I-95 corridor including Cumberland, Penobscot, Kennebec, Androscoggin, and York. Those counties which appear to present the least number of training opportunities in terms of demand and variety in decreasing rank order include Washington, Waldo, and Piscataquis. Maine's other eight counties are scattered between these two polarities. Labor supply and the variety of that supply aside, employment and training planners may be harder pressed in, for example, Piscataquis County than in Cumberland County to develop

training programs. In short, training programs can only be developed and offered in the context of local occupational opportunities. This suggests that linkage needs to exist between employment and training programs on the one hand and economic development initiatives on the other.

It is also suggested that development efforts, both economic and employment and training, could be better directed towards changing the State's total labor demand mix. As the Maine Occupation-Indicator Matrix indicates, employment demand through growth is increasingly in the high skilled/high wage professions, technical and science fields, and maintenance, production, and services occupations. This marks a definite turnover from low skilled/low wage clerks, orderlies, and food service attendants. Perhaps even more could be done to stimulate the demand for fulfilling occupations in those job clusters which are associated with the industries of health services, electrical manufacturing, metal fabrication, paper, and transportation equipment. These industries are expected to continue to experience growth in Maine through 1985.

TABLE 30

MAINE OCCUPATION-INDICATOR MATRIX
1980-1985

Three Digit D.O.T.	Occupation	Employment		Employment Change 1980-1985		Wages		SVP	Physical Demands	Environmental Conditions	Language Development	Math Development
		1980	Rank Order	Growth or Separation	Rank Order	Per Hour	Rank Order					
216	Accounting Clerk	2,095	18	229	22	4.83	85	6	S456	I	3	3
191	Appraiser, Real Estate	77	122	11	100	6.75	35	7	L2345	B	4	4
807	Automotive Body Repairer	504	66	90	50	5.79	53	7	M346	I5	4	3
620	Automotive Mechanic	3,572	10	444	9	6.72	36	7	M3456	I57	3	3
313	Baker, Bread and/or Pastry	142	109	16	97	4.51	92	7	M46	I36	3	3
313	Bakers Helper	112	113	21	92	3.35	112	3	M46	I3	1	1
805	Boilermaker, Apprentice	98	116	18	96	5.86	51	7	H2346	B56	4	3
210	Bookkeeper, Hand	4,096	8	496	8	5.21	73	4	S46	I	3	3
214	Bookkeeping, Billing Machine Operator	684	50	80	54	5.02	81	4	S46	I	3	3
861	Bricklayer, Apprentice	181	98	25	88	7.88	19	7/8	M346	B3	3	3
316	Butcher and/or Meatcutter	1,019	39	114	44	7.80	20	6	M46	I26	3	2
162	Buyer, Retail	1,161	34	130	40	8.59	12	6	L456	I	4	3
660	Cabinet Maker, Apprentice	180	99	25	88	7.12	27	6	M46	I	3	4
829	Cable-Splicer, Apprentice	236	90	20	93	6.14	44	7	L2346	B6	3	3
860	Carpenter, Apprentice	1,090	37	45	73	3.58	110	7	M2346	B56	3	3
211	Cashier	7,406	4	851	4	4.13	100	5	S456	I	3	3
844	Cement Mason, Helper	153	107	18	96	6.06	46	7	M2346	B46	3	3
669	Chain Offbearer, Lumber	251	87	94	48	4.71	89	2	H4	B56	1	1
355/ 359	Child-Care Worker	638	54	145	37	4.40	96	3	M3456	I4	2	1
564	Chipper	135	111	24	89	5.38	67	2	M24	I56	1	1
241	Claims Clerk	212	92	28	86	5.66	56	4	S56	I	3	3
141	Commercial Artist	87	119	13	99	5.20	74	7	S456	I	4	3
556	Compression Injection Molding Machine Operator	541	64	98	47	4.48	94	5	M46	I5	2	2
213	Computer Operator	477	67	85	51	5.77	54	6	L456	I	3	2
020	Computer Programmer	445	69	74	60	9.53	5	7	S56	I	4	5
313	Cook, Restaurant, Apprentice	1,278	32	127	41	2.40	113	7	M46	I	3	3
313	Cook, Short Order	2,232	16	251	19	3.59	109	4	M3456	I3467	3	2
332	Cosmetologist/Hairstylist	641	52	45	73	4.36	98	6	L546	I	3	3
160	Cost Estimator	335	79	39	78	6.72	36	7	S56	I	3	4
921	Crane, Derrick, and Hoist Operator	402	70	52	70	9.05	6	4	M46	B5	1	1
667	Cut-Off Saw Operator, Lumber	241	88	37	80	5.00	82	4	M46	I56	2	2
292	Delivery and Route Worker	3,736	9	324	15	5.43	65	3	M45	I	3	2
079	Dental Assistant	336	77	44	74	4.56	91	6	L4	I	4	3
078	Dental Hygienist	362	74	48	71	7.10	29	6	L456	I	4	3
712	Dental Lab Technician, Apprentice	109	115	15	98	4.36	97	7/8	L46	I	4	3
699	Die Cutter	881	43	70	61	5.56	58	4	L46	I	3	2
625	Diesel-Mechanic, Apprentice	786	47	83	52	5.50	61	7	H3456	I5	3	3
007	Drafter	758	48	156	33	8.28	14	7	S46	I	4	5
606	Drill Press and/or Boring Machine Operator	186	96	47	72	5.31	69	3	M46	I5	2	2
869	Dry Wall Applicator (Sheetrock)	182	97	34	82	7.00	32	3	M346	I	1	1
667	Edger, Automatic and/or Pony (Sawmill)	112	114	45	73	5.45	63	5	L4	I5	1	2
721	Electric Motor Repairer	91	118	19	95	4.40	96	7	M46	I	3	3
726	Electrical and Electronic Assembler	2,047	19	395	11	5.16	76	7	L456	I	4	4
824	Electrical and Electronic Technician	662	51	144	38	7.11	28	7	M2346	B6	3	4
829	Electrician, Helper	206	93	38	79	6.14	44	3	M234	I6	2	2

MAINE OCCUPATION INDICATOR MATRIX (con't.)

Three Digit D.O.T.	Occupation	Employment		Employment Change 1980-1985		Wages		SVP	Physical Demands	Environmental Conditions	Language Development	Math Development
		1980	Rank Order	Growth or Separation	Rank Order	Per Hour	Rank Order					
620	Engineering Equipment Mechanic	309	82	36	81	6.55	38	7	M34	I56	3	3
454	Faller and/or Bucker	1,571	29	250	20	8.97	7	3	H2346	056	1	1
206	File Clerk	639	53	82	53	3.84	107	3	L34	I	2	1
311	Food Preparation and Service Worker, Fast Food Restaurant	2,105	17	233	21	3.53	111	3	L45	I	2	1
915	Fuel Pump Attendant	1,649	25	190	25	4.42	95	3	M345	B	2	2
406	Gardener and Groundkeeper	987	40	116	43	4.01	103	3	M234	05	1	2
209	General Clerk, Office	7,461	3	919	3	4.73	87	2	L46	I	3	2
603	Grinding Machine Operator, Metal	223	91	48	71	7.05	30	2	L46	I	1	1
195	Group Recreation Worker, Program Aide	390	71	60	67	5.20	74	6	L5	B	4	3
372	Guard/Doorkeeper	1,311	31	187	28	5.74	55	3	L56	B6	2	1
850	Heavy Equipment Operator	1,821	21	195	24	7.93	18	5	M46	057	1	1
310	Host/Hostess, Restaurant	593	56	62	66	3.88	106	6	L45	I	4	3
921	Industrial Truck Operator	1,586	28	187	27	6.76	34	3	M46	B	1	1
214	Insurance Clerk, Medical	387	72	51	71	4.72	88	5	S456	I	4	3
203	Keypunch Operator	860	45	182	29	5.31	69	3	S46	I	2	2
604	Lathe Machine Operator, Metal	289	84	74	59	7.71	21	3	M46	I5	2	2
600	Layout Marker, Metal	46	124	16	97	8.19	16	6	M46	I5	3	4
079	Licensed Practical Nurse	2,502	14	333	13	5.90	50	6	M456	I7	4	3
822	Line Installer, Repairer	633	55	44	74	5.25	72	7	H2346	I	3	3
922	Loader, Car and Truck (Timber)	70	123	27	87	6.50	39	2	H24	B	1	1
921	Log Handling Equipment Operator	171	100	53	69	6.01	47	4	L46	I5	2	1
929	Logging Tractor Operator	1,096	36	180	30	6.00	48	4	M46	056	1	1
638	Machine Assembler	327	81	75	57	5.14	78	6	M2346	I5	3	3
601	Machine Tool Operator, Control and Combination	556	63	148	36	7.60	23	7	M46	I	3	3
600	Machinist, Apprentice	1,052	38	136	39	8.44	13	7	M346	I5	3	4
899	Maintenance Repairer, General Utilities	2,966	11	343	12	6.25	43	7	H2346	B56	3	4
623	Marine Mechanic Repairer	79	121	13	99	5.85	52	7	M346	B	3	3
638	Mechanic, Maintenance	1,608	26	189	26	7.54	24	7	H23456	B4567	3	3
079	Medical Assistant	335	78	43	75	5.13	79	6	L45	I	4	4
078	Medical Lab Assistant	377	73	49	72	6.30	41	4	L46	I	4	4
619	Metal Fabricator, Apprentice	93	117	28	86	5.15	77	7	M346	I567	3	4
605	Milling/Planning Machine Operator, Production	272	86	76	56	8.04	17	7	L46	I56	2	3
638	Millwright, Apprentice	962	41	53	69	10.29	3	7	H23456	I56	3	3
355	Nurse Aide/Orderly	7,035	5	984	2	3.90	105	4	M3456	I67	2	2
651	Offset Lithographic Press Operator	237	89	32	83	7.41	26	7	L46	I5	3	2
862	Oil Burner Installer	568	61	65	64	6.48	40	7	M346	I7	2	1
249	Order Clerk	564	62	54	68	5.41	66	4	S5	I	3	3
222	Order Filler	1,141	35	93	49	4.59	90	3	L4	I	2	2
845	Painter, Automotive	143	108	34	82	4.90	84	6	M2346	I67	2	2
840	Painter, Maintenance and Construction	858	46	63	65	7.44	25	7	L2346	B6	2	2
599	Painter, Production	575	58	124	42	5.30	70	3	M46	I7	2	1
119	Paralegal Assistant	168	103	23	90	5.91	49	7	S	I	5	2
215	Payroll, Timekeeping Clerk	722	49	75	58	5.54	59	4/3	S46	I	4	3
074	Pharmacy Helper	169	102	23	90	5.05	80	6	L46	I	4	3

MAINE OCCUPATION INDICATOR MATRIX (con't.)

Three Digit D.O.T.	Occupation	Employment		Employment Change 1980-1985		Wages		SVP	Physical Demands	Environmental Conditions	Language Development	Math Development
		1980	Rank Order	Growth or Separation	Rank Order	Per Hour	Rank Order					
869	Pipelayer	154	106	19	94	5.85	52	4	H2346	B567	3	3
665	Planer Operator	86	120	31	84	5.34	68	4	M46	I57	2	2
862	Plumber and/or Pipefitter	1,944	20	269	18	9.88	4	7	H23456	B56	3	3
862	Plumber and/or Pipefitter Apprentice	155	105	22	91	3.75	108	7	H2346	B6	3	3
669	Power Barker Operator	199	94	47	72	5.52	60	3	L46	B56	2	2
355	Psychiatric Aide	515	65	67	63	6.00	48	4	M456	I	3	2
615	Punch Press Operator, Metal	170	101	32	83	6.00	48	5	H46	I56	1	2
078	Radiologic Technologist/Technician	329	80	42	76	6.27	42	6	M456	I6	5	4
237	Receptionist	1,187	33	148	35	4.10	101	5	S45	I	3	2
079	Respiratory Therapist	189	95	24	89	7.70	22	6	L46	I7	3	3
806	Rigger, Apprentice	167	104	29	85	5.20	74	7	H23456	B6	2	2
667	Ripsaw Operator	139	110	25	88	4.94	83	4	M46	I56	1	1
250	Sales Agent, Insurance	570	60	76	56	12.06	2	6	L5	I	4	3
290	Sales Clerk	11,866	1	1,314	1	4.08	102	3	L45	I	2	3
201	Secretary	5,553	6	741	6	5.62	57	6	S456	I	4	3
788	Sewer, Hand (Shoe)	904	42	76	56	6.10	45	3	L46	I	1	1
804	Sheet Metal Worker, Tinsmith Apprentice	862	44	166	31	6.88	33	7	M2346	B56	3	4
806	Shipfitter, Apprentice	308	83	78	55	8.72	9	7/8	H2346	O56	2	3
929	Shipping Packer	1,603	27	163	32	5.44	64	3	L4	I	3	2
222	Shipping and Receiving Clerk	1,485	30	151	34	5.48	62	5	M46	I	2	3
195	Social Service Aide (Homemaker)	585	57	108	46	3.90	105	5	L45	I	4	2
202	Stenographer	572	59	76	56	5.26	71	5	S456	I	3	2
299	Stock Clerk, Sales	2,944	12	328	14	4.50	93	4	M346	I	2	2
222	Stock Clerk, Stockroom	2,593	13	297	17	5.17	75	5	H23456	I	2	2
018	Surveyor	129	112	22	91	8.69	10	7	L456	O	4	5
012/ 020/ 109	Systems Analyst	336	76	49	72	12.80	1	7	S56	I	5	5
211	Teller	2,439	15	322	16	3.92	104	5	L456	I	2	5
601	Tool Maker and Die Maker, Metal	456	68	110	45	8.76	8	7	M46	I5	4	4
904	Tractor/Trailer Truck Driver	1,661	24	68	62	7.02	31	4	M346	B5	3	2
905	Truck Driver, Heavy	4,569	7	523	7	6.69	37	4	M346	B5	2	2
203	Typist	1,749	23	220	23	4.24	99	3	S46	I	3	2
169	Underwriter	287	85	321	82	8.24	15	7	S456	I	5	4
350	Waiter/Waitress	7,804	2	831	5	2.22	114	3	L45	I	2	2
819	Welder (Combination), Apprentice	1,790	22	433	10	8.61	11	6	M346	B36	3	3
669	Woodworking Machine Operator, Apprentice	353	75	40	77	4.74	86	7	M46	I567	3	3

SECTION IV

EMPLOYMENT AND TRAINING PROGRAM PLANNING RECOMMENDATIONS

The population of Maine increased faster than the populations of the United States and New England between 1970 and 1980. Due to the post World War II baby boom, the increase in the population between 18 and 44 years of age was especially large. The female labor force participation rate is projected to increase from 41.2 percent in 1970 to 50.5 percent in FY 1983. The large increase in the working age population and the greater labor force participation of females resulted in a rapidly expanding labor force during the 1970s. This labor force growth put pressure for job creation on the Maine economy.

Employment recorded significant growth during the 1970s. However, this employment growth did not result in a significantly lowered unemployment rate because of the labor force growth. The Maine unemployment rate has averaged in the 7 percent range every year since 1979. During 1981 an average of 37,000 Mainers were unemployed. Projections for FY 1983 indicate unemployment averaging 38,000 and an unemployment rate of 7.3 percent. This projection may prove low if the national recession continues into the last part of 1982 and early 1983.

Employment and training programs obviously will not come to the aid of all 38,000 unemployed Maine residents. This report has offered a framework for answering several important questions. Who most needs to be served? How can they best be served? Which industries show the most promise? Which occupations appear most suitable for training? Guidelines for answering these questions have been presented, precise answers are impossible.

Population groups found to be most in need of employment and training program services were females, youths, high school dropouts, and minorities. In a geographical context, Aroostook, Somerset, Waldo, and Washington counties were found to be especially in need of employment services. These counties shared high rates of unemployment, low incomes, and a relatively high percentage of their populations receiving benefits from income assistance programs. These counties pose a special problem for program planners, especially in light of their narrowly diversified economic bases.

Increasing participation by females in the labor force resulted in the female labor force in Maine increasing from 147,641 in 1970 to a projected 236,322 in FY 1983. Unemployment rates for females have remained above male rates. Female Job Service applicants were more apt to be characterized as economically disadvantaged than their male counterparts. The problem females pose for program planners is twofold. First, new and reentrant female workers need to find jobs to help them gain needed job experience. Second, skills must be obtained to help them find jobs offering employment stability and a decent wage.

Unemployment rates are especially high for young workers. Young workers need to find entry level jobs both to increase their own confidence and to increase the confidence employers will place in them. In other words, young people need to pass the "experience required" barrier. Especially

acute are the problems faced by high school dropouts. Each year approximately 3,000 Maine youth drop out of high school. Important to these dropouts are programs providing high school equivalency and/or special job skills.

Although minorities comprise a very small percentage of the Maine population, they experience especially high unemployment rates. Their problems may include discrimination, low educational attainment, and language barriers. Minorities can be expected to experience more diverse problems than the rest of the labor force. However, their long-term goal remains the same, namely, a decent job with decent pay.

The industry-indicator matrix presented in this report serves as an informative guide to the structure of the Maine economy. Industries were ranked in terms of desirability for job development. The reader should not use the matrix as a rigid guide--attrition can lead to a desirable job opportunity in any industry. However, the matrix presents a reasonable guide for the program planners as some choices among industries will inevitably have to be made. Industries finishing in the top ten on the matrix were health services, transportation equipment, miscellaneous retail, business services, printing and publishing, legal services, banking, wholesale trading of nondurable goods, paper and allied products, and electrical and electronic equipment. Generally these industries have recorded good growth, better than average wages, and a relatively low level of layoffs.

Program planners should remember that specific companies do not necessarily reflect industry trends. Also, opportunities within industries can be expected to vary by geographic area. Industry data for individual counties can be obtained from the Division of Economic Analysis and Research.

The occupation-indicator matrix represents a detailed summary of the types of opportunities available for occupations which are most suitable for employment and program training. The main categories on the matrix are employment size, employment demand, and wages. Also included are specific vocational preparation, physical demands, environmental conditions, and language and math development. The most significant demand was found for occupations in the clerical, technical, trade, and service clusters. Specific planning would require consideration of opportunities within a finite labor market. Occupational employment and wage information is available for each of Maine's counties from the Division of Economic Analysis and Research.

SECTION V

EXPLANATION OF METHODOLOGIES AND PROCEDURES

Occupational Employment Statistics

The report of Employment, Wages, and Contributions covered by the Maine Employment Security Law is used as the sampling frame for the Occupational Employment Statistics (OES) survey. The frame is stratified by three-digit Standard Industrial Classification (SIC) and by nine employment size classes as of a particular period of time. All usable employer questionnaires are separated into seven employment size groups by industry. The reported total employment and occupational employment on each questionnaire is multiplied by the weight which is assigned to it during the sample selection. These data are then tied into the universe employment for the reported month, with such universe or benchmark figures coming from the report of Employment, Wages, and Contributions. The total weighted survey data by size class, by industry, are divided into the universe data for corresponding size and industry classes. This procedure produces benchmark factors which are applied to the occupational data, thus accounting for the nonresponse to the OES survey. These occupational estimates are then summed across size classes to industry totals and rounded to the nearest ten. The percent of occupational distribution for each industry is then calculated.

The industries not yet covered by the survey for which occupational estimates are not developed consist of agriculture, forestry, and fishing; textile finishing, except wool; women's and children's undergarments; blast furnace products; ordnance; public education; private households; and government.

Population Projections for Fiscal Year 1983

The statewide civilian population projections for Fiscal Year 1983 were developed by the Bureau of the Census. Population breakouts by age, race, and sex for Fiscal 1983 were derived by the Lawrence Berkeley Laboratory. National survival rates were applied to the 1970 population totals for the various age cohorts by sex and race. Then, to the projected survival population, the estimated number of births based on an average of the State fertility rates for 1970-1975 and the national estimated fertility rates for the period 1975-1980 were added. At the State level, 1980 population counts by sex and by age from the 1980 Census were used as population control totals for 1980. The next step in the calculation was an adjustment for area net migration based on an extrapolation of area net migration rates for the period 1970-1975 to Fiscal 1983. The total projected population estimates by sex, race, and age group for Fiscal Year 1983 which took into account births, deaths, and migration were then reconciled to the total population projections. For consistency, the parts had to be adjusted to fit the whole.

Labor Force Projections for Fiscal Year 1983

The statewide labor force projection for Fiscal Year 1983 was based on a simple linear regression using time as the independent variable and incorporated an historical annual average series spanning a twelve-year period.

The R^2 statistic exceeded .98 thus indicating a good fit between the estimated and actual values and a strong linear correlation between the independent and dependent variables. The unemployment projection for the State was based on time and the national unemployment estimates as independent estimates. The R^2 statistic in this case was over .85 thus indicating a good equation. Both of these statewide projections were adjusted slightly to account for the effects of certain exogenous variables on the State economy. These projected estimates were submitted to Berkeley. Labor force estimates for Fiscal 1983 by age, race, and sex for the State were developed at Berkeley through the application of national rates of change in the labor force participation rate to the rate for these groups for the State.

SECTION VI

GLOSSARY OF TERMS

ACCESSIONS: See LABOR TURNOVER.

APPLICANT: A person legally qualified to work who has either a partial application or a full application on file with a Job Service local office.

AGRICULTURAL EMPLOYMENT: Includes the total of farmers and family and hired workers who receive wages, salaries, or commissions for work performed on farms for the pay period including the 12th of the month.

AREA CLASSIFICATIONS: The Department of Labor each month classifies major labor areas throughout the country according to the adequacy of the labor supply. The classifications are based on reports prepared by State Employment Security Agencies (SESAs) on employment and unemployment developments and outlooks for each area. The unemployment rate is a key factor in determining the area classification with consideration also given to other factors such as employment and unemployment outlook, local employer estimates of human resources needs, the relationship between labor supply and demand, and the seasonal patterns of employment and unemployment fluctuations in the area.

AVERAGE HOURLY EARNINGS (manufacturing): Average hourly earnings for an industry are obtained by dividing total sample payrolls by total worker hours. The earnings reflect not only basic hourly and incentive wage rates but also such factors as premium pay for overtime work and shift differentials.

AVERAGE WEEKLY HOURS (manufacturing): The number of hours for which pay is received by persons on an establishment payroll for any part of the pay period which includes the 12th of the month.

AVERAGE OVERTIME HOURS: The portion of gross average weekly hours which are in excess of regular hours and for which overtime premiums are paid.

AVERAGE WEEKLY EARNINGS: The average weekly earnings are the product of the weekly hours and hourly earnings.

BENCHMARK STATISTICS: Comprehensive data compiled periodically and used as a basis for developing and adjusting interim estimates made from sample information. Monthly nonfarm wage and salary employment estimates prepared under contract with the U.S. Bureau of Labor Statistics are developed from reports submitted by a representative sample of employers. These estimates are revised to benchmark statistics once every year. Under the procedure, the benchmark is used to establish the level of employment; the sample is used to measure the month-to-month changes in the level. The primary employment benchmark is the employment covered by the Maine Employment Security Law.

CLAIMANT, UNEMPLOYMENT INSURANCE: An individual who has filed a request for determination of insured status or a new claim.

CIVILIAN EMPLOYMENT: See EMPLOYED PERSONS.

CIVILIAN LABOR FORCE: All persons 16 years of age or over within a specified geographic area who are either employed or unemployed, excluding persons serving in the armed forces.

COMPREHENSIVE EMPLOYMENT AND TRAINING ACT OF 1973 (CETA): The purpose of this Act is to provide job training and employment opportunities for economically disadvantaged, unemployed, and underemployed persons; to assure that training and other services lead to maximum employment opportunities; and to enhance self-sufficiency by establishing a flexible and decentralized system of federal, state, and local programs. The Act, which provides grants to selected prime sponsors and the integration of categorical programs, replaces the Manpower Development and Training Act (MDTA).

CONSUMER PRICE INDEX (CPI): This index is also known as the "cost-of-living" index. The Consumer Price Index is a statistical measure of change, over time, in the prices of goods and services in major expenditure groups such as food, housing, apparel, transportation, health care, and entertainment typically purchased by urban consumers. Essentially, it measures the purchasing power of consumers' dollars by comparing what a sample "market basket" of goods and services costs today with what the same sample market basket cost at an earlier date. The index measures price changes from a designated reference date--1967, which equals 100.0. Any change in the cost of goods and services is expressed as a percentage increase or decrease in the index. For example, an 82 percent increase is shown as an index value of 182. Expressed in dollars, the price of a base period "market basket" of goods and services bought by all urban consumers has risen from $10 in 1967 to $27.24 in 1981.

CURRENT POPULATION SURVEY (CPS): A nationwide monthly household survey conducted by the U.S. Bureau of the Census for the Bureau of Labor Statistics. The sample consists of approximately 60,000 households selected to represent the U.S. population 16 years of age and older. Households are interviewed on a rotating basis so that three-fourths of the sample is the same for any two consecutive months. The survey of the civilian noninstitutional population provides monthly statistics on employment, unemployment, and related subjects which are analyzed and published by the Bureau of Labor Statistics. Each month national labor force information from this survey is published by the U.S. Department of Labor in Employment and Earnings, Monthly Report on the Labor Force and the Monthly Labor Review.

DICTIONARY OF OCCUPATIONAL TITLES (DOT): Descriptive information concerning most jobs in the American economy. It presents a systematic, numeric classification of occupations arranged according to job content, tasks or activities performed, and inter-relationships with other occupations. The standardization of job titles and the accompanying definitions provide a unique tool for users of occupational information. Each occupation is classified (in order of increasing detail) into a category (one-digit code), a division (two-digit code), and a group (three-digit code).

DISADVANTAGED INDIVIDUAL: See ECONOMICALLY DISADVANTAGED.

DISPOSABLE PERSONAL INCOME: Income that remains after taxes and other nontax payments to the government are deducted. See also Per Capita Income, Personal Income, and Spendable Earnings.

ECONOMIC INDICATORS: Measurements of various economic and business movements and activities of a community such as employment, unemployment, hours worked, income, savings, volume of building permits, volume of sales, etc., the fluctuation of which affects and may be used to determine overall economic trends.

ECONOMICALLY DISADVANTAGED INDIVIDUAL: An individual who is a member of a family which (1) received cash welfare payments or (2) has a total annual income that does not exceed established poverty levels determined in accordance with criteria established by the Office of Management and Budget (OMB).

EMPLOYMENT STATUS: The indication of whether or not the individual is employed and the regular period of time that the individual is employed.

Full-Time Employment: The 40-hour week, except where fewer hours are normal to the occupation, but on no account less than 30 hours per week.
Part-Time Employment: Employment which does not meet the full-time employment definition.

EMPLOYED PERSONS: All civilian persons who, during a specified week, did any work at all as paid employees, in their own business profession, on their own farm, or who worked 15 hours or more as unpaid workers on a farm or in a business operated by a member of the family. Also included are all those persons who were not working but who had jobs or businesses from which they were temporarily absent because of illness, bad weather, vacation, labor-management disputes, or personal reasons whether or not they were paid for the time off by their employers or if they were seeking other jobs. Excluded from the employed group are persons whose only activity consists of work around the house (e.g., housework, painting, or repairing own home) or volunteer work for religious, charitable, and similar organizations.

EMPLOYMENT SECURITY AUTOMATED REPORTING SYSTEM (ESARS): Reports based on data compiled from state and local Employment Security job applications, job orders, and office operations. Reports are prepared by the State for local offices, districts, and regions.

ENTRY-LEVEL AND TRAINEE: Two nonsynonymous terms. Entry-level refers to a job occupation and trainee refers to an individual.

ENTRY-LEVEL: A term usually associated with those jobs or occupations for which employers hire workers either with little or no previous work experience or with relatively minimum training or education. Occupations which require a relatively greater amount of education or training may have specific entry-level classifications such as "apprenticeship" or "internship."

TRAINEE: An individual who is being hired for a job which may or may not require previous experience or education. A trainee may start a job at entry level, apprenticeship level, or internship level position.

ETHNIC GROUP: Apparent race of applicant. (Term as used by Job Service offices.)

EXPANSION DEMAND: New job openings created by expansion in a given occupation or industry. This is determined by a simple subtraction of the current year employment level from the projected year employment level. See also LABOR DEMAND and REPLACEMENT DEMAND.

FISCAL YEAR (FY): A term utilized by most governmental agencies to denote a 12-month period beginning October 1 and ending September 30 of the next calendar year. Thus, FY 1983 designates the time period between October 1, 1982 and September 30, 1983.

GROSS NATIONAL PRODUCT (GNP): The GNP is generally considered the most comprehensive single measure of economic activity. It is measured by the market value of final goods and services produced by the nation in a designated time period, usually a calendar or fiscal year.

INDUSTRY: Describes the major type of economic activity engaged in by a firm or group of firms. The Standard Industrial Classification (SIC) system provides numerical classifications for these activities.

INITIAL CLAIM: Either a new or an additional claim. A new unemployment claim is a request for determination of insured status for purposes of establishing a new benefit year. An additional claim is a notice filed at the beginning of a second or subsequent series of claims within a benefit year or within a period of eligibility when a break of one week or more has occurred in the claims series with intervening employment.

JOB BANK: This is a computerized listing of the job openings placed by employers with the Job Service. The listings are both alphabetical and by DOT code. This service is provided at no cost to either employers or applicants. In addition to computer printouts, Job Service local offices are equipped with microfiche readers to assist applicants in locating a job for which they are qualified. An Employment Specialist will interview the applicant and, if the applicant is qualified, phone the employer to arrange for a job interview. See also REFERRAL and PLACEMENT.

JOB DEVELOPMENT: The process of soliciting a public or private employer's order for a specific applicant for whom the local Job Service office has no suitable opening currently on file.

JOB INSURANCE: See UNEMPLOYMENT INSURANCE.

JOB OPENING: A single job opening for which the local Job Service office has on file a request to select and refer an applicant or applicants.

LABOR AREA: See LABOR MARKET AREA.

LABOR DEMAND: An estimate of the number of job opportunities which exist and will occur over a given period of time. It is comprised of the following major components: EXPANSION DEMAND and REPLACEMENT DEMAND.

LABOR FORCE: See CIVILIAN LABOR FORCE.

LABOR-MANAGEMENT DISPUTES: This is more commonly known as a "strike" or "work stoppage." Workers are engaged in a work stoppage to improve their position in negotiations with management for increased wages, fringe benefits, and/or improved working conditions.

LABOR FORCE PARTICIPATION RATE: The proportion of the total civilian noninstitutional population or of a demographic subgroup of that population classified as "in the labor force."

LABOR MARKET ANALYSIS: The measurement and evaluation of economic forces as they relate to the employment process in the local labor market area. The many variables affecting labor demand-supply relationships, including such factors as population growth and characteristics, industrial structure and development, technological developments, shifts in consumer demands, volume and extent of unionization and trade disputes, recruitment practices, wage levels, conditions of employment, and training opportunities.

LABOR MARKET AREA: Consists of a central city or cities and the surrounding territory within commuting distance. It is an economically integrated geographical unit within which workers may readily change jobs without changing their places of residence. The area generally takes the name of its central city. The boundaries depend primarily on economic and geographic factors, and not on political jurisdiction.

LABOR MARKET INFORMATION (LMI): The delivery of labor force, employment, unemployment, wage, supply and demand, occupational, industrial, economic, and demographic data for the analysis of human resources problems for a specifically defined area.

LABOR SUPPLY: The number of persons employed and unemployed plus those that would seek employment if they believed jobs were available. Generally this term has been applied to those who are unemployed. However, the two other groups may also be included in the supply picture.

LABOR TURNOVER: Usually expressed as a rate based on total employment in the establishment or industry and is shown in terms of so many per 100 workers on the payroll at a given time. The term has multiple definitions varying with the context:

a. As applied to the total labor force for an occupation, industry, or area, it refers to the movement into and out of jobs during a given period of time by workers.

b. The usual measurement of turnover in the context of labor market statistics available to individual establishments consists of the gross movement of wage and salary workers into and out of employed status. This movement is comprised of two broad types: ACCESSIONS (additions of temporary and permanent workers to the payroll, whether they are as new hires or as rehires), and SEPARATIONS (terminations of workers by quits, layoffs, and other separations caused by discharges, disability, retirement, labor force withdrawal and entry into the armed forces).

LAYOFF: Suspension from pay by the company for reasons such as lack of orders, plant breakdown, shortage of materials, or termination of seasonal or temporary employment, etc.

LOCAL OFFICE AREA: The towns which comprise the area serviced by a local office of the Employment Security Agency.

MAJOR GROUP: See STANDARD INDUSTRIAL CLASSIFICATION MANUAL.

MAJOR LABOR MARKET AREA: These areas usually have at least one central city with a population of 50,000 or more. In most instances boundaries of major labor areas coincide with those of Standard Metropolitan Statistical Areas (SMSAs) as determined by the Office of Management and Budget in cooperation with a federal interagency committee.

MINIMUM WAGE: Refers to the lowest wage to be paid employees covered under the Fair Labor Standards Act of 1938 and its subsequent amendments. The minimum wage effective January 1, 1982 is $3.35 per hour unless the particular establishment is specifically exempted under the law.

MINORITY: A term denoting the sum of Spanish American and all races except white.

NONFARM WAGE AND SALARY EMPLOYMENT: All full-time and part-time employees of all classes (including employees on paid vacation or paid sick leave) who work in or receive compensation from nonfarm establishments for any part of the pay period including the 12th of the month. It does not include pensioners, members of the armed forces, self-employed or unpaid family workers, or persons on leave of absence without pay.

OTHER NONFARM EMPLOYMENT: This refers to self-employed, unpaid family and private household workers.

OCCUPATION: The name or the title of a job identifying various job duties of a worker. See also DICTIONARY OF OCCUPATIONAL TITLES.

OCCUPATIONAL CATEGORIES, DIVISIONS, GROUPS: See DICTIONARY OF OCCUPATIONAL TITLES.

OCCUPATIONAL DEMAND: Demand for workers by occupation rather than by industry. See also LABOR DEMAND.

OCCUPATIONAL PROJECTIONS: A statistical procedure developed by the U.S. Bureau of Labor Statistics to provide future labor demand information by occupation for states and major areas.

PARTICIPATION RATE: See LABOR FORCE PARTICIPATION RATE.

PER CAPITA INCOME: A measure of income by unit of population (per person). Total personal income for area divided by the population of the area. See also DISPOSABLE PERSONAL INCOME, PERSONAL INCOME, and SPENDABLE EARNINGS.

PERSONAL INCOME: Income received from all sources minus contributions to social insurance, retirement plans, and social security. See also DISPOSABLE PERSONAL INCOME, PER CAPITA INCOME, and SPENDABLE EARNINGS.

PLACEMENT: The hiring by an employer of an individual referred by the Job Service for a job or an interview, providing that the following procedural steps have been completed: (1) prior arrangement has been made with the employer for the referral of an individual or individuals; (2) referred an individual who had not been specifically designated by the employer; (3) verified from a reliable source, preferably the employer, that the individual had entered on a job; and (4) recorded the transaction on an employer order form prior to referral and on other appropriate Job Service forms.

PLACE OF RESIDENCE: Employment, unemployment, and labor force data based on where workers live rather than where they work. See also WORK FORCE.

REFERRAL (referral to a job): The act of arranging to bring to the attention of an employer (or another local Job Service office) an applicant who is available for a job opening following a selection interview with the applicant.

REPLACEMENT DEMAND: The demand or job openings created by workers who leave the labor force for any reason (e.g., death, retirement) is known as replacement demand and is part of TOTAL DEMAND. See also LABOR DEMAND and EXPANSION DEMAND.

SEASONAL ADJUSTMENT: Statistical modifications made to compensate for predictable fluctuations which recur more or less regularly every year in a time series such as unemployment rates. These fluctuations can be so strong as to distort the underlying trends. For this reason unemployment rates are reported on a seasonally adjusted basis to compensate for such influences as the summer closing of schools, temporary hiring for the holiday season, and the seasonal style changes. Such adjustments facilitate the evaluation of the more important underlying reasons for month-to-month changes in joblessness.

SELF-EMPLOYED, UNPAID FAMILY, AND DOMESTIC WORKERS: Persons who work in nonfarm industries who are not on payrolls, i.e., self-employed persons, domestic workers in private households, and unpaid family workers.

SERVICE OCCUPATIONS, SERVICES INDUSTRIES, AND SERVICE-PRODUCING INDUSTRIES: Three terms often used interchangeably and therefore incorrectly. Each has a separate and distinct meaning.

a. SERVICE OCCUPATIONS refers to the category of jobs performed in and around private households; serving individuals in institutions and in commercial and other establishments; and protecting the public against crime, fire, accidents, and acts of war. All industries employ workers in service classifications. The numerically important groups include culinary and related food workers, cosmetologists, attendants in hospitals, barbers, janitors, porters, room cleaners, and charworkers.

b. SERVICES INDUSTRIES refers to establishments in that division of the industrial structure which render a wide variety of services to individuals and business establishments. These industries, which employ workers in a wide variety of white collar, blue collar, and service occupations, represent just one segment of the much larger group of service-producing industries.

c. In order to assist in the evaluation of underlying economic trends, it is an accepted practice to consider that the economy consists of two major parts: the goods-producing sector (manufacturing, mining, and construction) and the SERVICE-PRODUCING INDUSTRIAL SECTOR. The latter includes transportation, communications, and utilities; trade; finance, insurance, and real estate; the SERVICES INDUSTRIES; and government. Accordingly, it is a multi-industry group which is characterized by highly complex occupational staffing patterns. In terms of white collar, blue collar, and service occupational or job classifications, the latter is the smallest group employed.

SPENDABLE EARNINGS: Earnings from which estimated social security and federal income taxes have been deducted.

STANDARD INDUSTRIAL CLASSIFICATION (SIC) MANUAL: The SIC covers the entire field of economic activity. It makes it possible to classify establishments according to type of activity. Classification is by major group (two-digit code), industry group (three-digit code), and industry (four-digit code) in order of increasing detail. The SIC promotes uniformity and comparability in presentation of statistical data and also facilitates collection, tabulation, presentation, and analysis of data.

STANDARD METROPOLITAN STATISTICAL AREA (SMSA): This is a title applied to the large concentrated labor market areas of the U.S. and adopted by the U.S. Bureau of the Budget in 1949. The primary objective was to have all reporting federal agencies utilize the same boundaries for a given geographic area in publishing statistical data useful for analyzing metropolitan problems. The criteria used for defining SMSAs are essentially those used in defining major labor market areas. The criteria for defining an SMSA are as follows:

Population Criteria

A. Each Standard Metropolitan Statistical Area must include at least:

1. One city with 50,000 or more inhabitants, or
2. Two cities having contiguous boundaries and constituting, for general economic and social purposes, a single community with a combined population of at least 50,000, the smaller of which must have a population of at least 15,000.

B. If two or more adjacent counties each have a city of 50,000 inhabitants or more (or twin cities under A. 2., and the cities are within 20 miles of each other, city limit to city limit), they will be included in the same area unless there is definite evidence that the two cities are not economically or socially integrated.

Criteria of Metropolitan Character

The criteria of metropolitan character relate primarily to the attributes of the county as a place of work or a concentration of nonfarm workers. Specifically, these criteria are:

A. At least 75 percent of the labor force in the county must be in the nonfarm labor force.

B. In addition to criteria A, the county must meet at least one of the following conditions:

   1. It must have 50 percent or more of its population living in contiguous minor civil divisions with a density of at least 150 persons per square mile in an unbroken chain of minor civil divisions with such density radiating from a central city in the area.

   2. The number of nonfarm workers employed in the county must equal at least 10 percent of the number of nonfarm workers employed in the county containing the largest city in the area, or be the place of employment of 10,000 nonfarm workers.

   3. The nonfarm labor force living in the county must equal at least 10 percent of the number of nonfarm labor force living in the county containing the largest city in the area or be the place of residence of a nonfarm labor force of 10,000.

Criteria of Integration

The criteria of integration relate primarily to the extent of economic and social communication between the outlying counties and central county.

A. A county is regarded as integrated with the county or counties containing the central cities of the area if either of the following criteria is met:

   1. If 15 percent of the workers living in the county work in the county or counties containing central cities of the area, or

   2. If 25 percent of those working in the county live in the county or counties containing central cities of the area.

SUPPLY AND DEMAND: See LABOR DEMAND and LABOR SUPPLY.

TOTAL EMPLOYED: The sum of agricultural, nonfarm wage and salary, self employed, unpaid family, and domestic workers adjusted to eliminate double counting of persons holding more than one job and to a place of residence basis.

TOTAL UNEMPLOYED: The sum of persons receiving unemployment insurance benefits, persons who have exhausted their unemployment insurance benefits and are still unemployed, persons who have delayed filing for benefits but who are not working, unemployed persons who applied for benefits but were not qualified to receive them, workers separated from industries

not covered by unemployment insurance, and unemployed persons newly entering or reentering the labor force. According to the U.S. Bureau of the Census, unemployed persons consist of those in the civilian labor force 16 years old and over who did not work during the survey week, but who made specific efforts to find a job within the last four weeks and who were available for work during the survey week. Also included are those who were not working and were waiting to report to a new wage or salary job within 30 days.

TOTAL UNEMPLOYMENT RATE: This is a familiar economic indicator. It is an expression of all unemployed persons as a percent of the civilian labor force.

$$\text{Total Unemployment Rate} = \frac{\text{Total Unemployment}}{\text{Total Labor Force (Unemployment + Employment)}}$$

UNEMPLOYMENT INSURANCE (UI): Unemployment insurance is a program for the accumulation of funds paid by employers to be used for the payment of unemployment insurance to workers during periods of unemployment which are beyond the workers control. Unemployment insurance replaces a part of the worker's wage loss if he becomes eligible for payments. UI serves as an economic stabilizer by maintaining an individual's purchasing power when unemployed.

UNEMPLOYMENT RATES: Unemployment, its level and composition, is widely regarded as a key index of economic well-being. Because of this, there is a basic need for the objective measurement of the number and characteristics of the unemployed.

UNFILLED JOB OPENINGS: Job openings received by the local Job Service office that have not been filled as of a specified date.

UNIVERSE OF NEED (UN): The universe of need represents the total number of different individuals, both UNEMPLOYED and UNDEREMPLOYED, who may need employment-related assistance at some time during the year. It includes estimates of the DISADVANTAGED, other POOR PEOPLE who do not meet the criteria as disadvantaged, individuals in near poverty, and nonpoor workers who are UNEMPLOYED or underutilized during the course of the year.

WEEKLY COVERED WAGE: The average weekly earnings of all employees covered under the Maine Employment Security Law.

WHOLESALE PRICE INDEX (WPI): The WPI measures average changes in prices of commodities sold in primary markets in the United States. "Wholesale" as used here, refers to sales in large quantities by producers, not to prices received by wholesalers, jobbers, or distributors. It represents the movement of prices of all commodities produced in the manufacturing; agriculture, forestry, fishing; mining; gas, electricity, and public utilities sectors. It also includes all commodities produced or imported for sale in commercial transactions in primary markets in the United States.

APPENDIX A:

SOURCES OF DATA CONTAINED IN THE MAINE OCCUPATION-INDICATOR MATRIX

Employment 1980

These figures were developed using OES Statewide Wage and Salary Employment and Percent Distribution by Occupation, 1980 and Projected 1985, from the OES Survey-Based Matrix Projections Program, 1980-1985.

Employment Demand through Growth and Separation, 1980-1985

These figures were developed using OES Statewide Wage and Salary Employment and Percent Distribution by Occupation, 1980 and Projected 1985.

Although 124 job titles are contained in the matrix, there are only 114 different wages rank ordered and 100 different demand designations. In other words, ties are assigned the same numeric rank order. For example, Maine mechanics and pipelayers receive the same average wage of $5.88; therefore, both job classifications are rank ordered as being 52nd in hourly wages. Similarly, sales agents, insurance and stenographers are experiencing the same absolute order of employment demand of 76 employees; therefore, both job classifications are rank ordered as being 56th in demand.

Wages Per Hour

Wage data were obtained from the following five sources:

1. The Division of Economic Analysis and Research publication 1980 Maine Occupational Wages in Manufacturing Industries was used to determine wage values for manufacturing occupations. To inflate these figures to 1981 levels, wages were multiplied by a factor of 116 percent.

2. Most nonmanufacturing wages were extracted from the Division of Economic Analysis and Research's 1981 Maine Occupational Wages in Selected Nonmanufacturing Industries. Where an occupation appears in both manufacturing and nonmanufacturing sectors, e.g., secretary, hand bookkeeper, order filler, wages are weighted through generating an average wage.

3. The Division of Economic Analysis and Research's Woods Wage Survey 1981 was used to examine the lumber industry.

4. For missing survey-based nonmanufacturing jobs, wages were obtained through Job Bank listings for 1981. Wages listed on the Job Bank are the minimum the employer would pay for that occupation. Because they are minimum figures, these wages were multiplied by a factor of 130 percent to equal average 1981 wages.

5. Wages in health occupations were extracted from the Hospital Wage Survey conducted in January 1982 by the Division of Economic Analysis and Research in conjunction with the Maine Hospital Association.

Specific Vocational Preparation (SVP)

SVP is defined as the amount of time required to learn the techniques, acquire the information, and develop the facility needed for average

performance in a specific job-worker situation. This training may be acquired in a school, at work, or in a military institution or a vocational environment. It does not include orientation training required of a fully qualified worker to become accustomed to the special conditions of any new job. Specific vocational training includes:

1. Vocational (high school, commercial or shop training, technical school, art school, and that part of college training which is organized around a specific vocational objective).

2. Apprenticeship training (obtained only in those jobs offering apprenticeships).

3. In-plant training (given by the employer in the form of organized classroom study).

4. On-the-job training (instruction given to a learner or trainee on the job by a qualified worker).

5. Essential experience in other jobs (received in less responsible jobs or other jobs which qualify for a higher grade job).

In order to express the amount of SVP required by various jobs, the following scale of time periods has been established.

Level	Time
1	Short demonstration only
2	Anything beyond short demonstration up to and including 30 days
3	Over 30 days up to and including three months
4	Over three months up to and including six months
5	Over six months up to and including one year
6	Over one year up to and including two years
7	Over two years up to and including four years
8	Over four years up to and including ten years
9	Over ten years

The amount of time needed for SVP is also an indicator of the complexity of a job. There are actually three factors which influence the assigning of SVP to a specific occupation. The factors have to do with different aspects of job complexity. They are:

1. Learning the techniques of the job.

2. Acquiring the necessary job knowledge.

3. Developing performance competency.

In those occupations which offer apprenticeships, associated SVP codes are used. Therefore, SVP codes and associated training time, as contained in the matrix, may be somewhat on the high side. Formal apprenticeships, as a means of entering an occupation, require more of an investment in time than would otherwise be the case for that occupation in a less structured training program.

Four of the matrix variables, along with the statements written below, are taken from DOL/ETA's 1981 publication entitled Selected Characteristics of Occupations Defined in the Dictionary of Occupational Titles. For a more complete description of these concepts, the user is referred to the appendices contained in this volume.

Physical Demands

Physical demands serve as a means of expressing both the physical requirements of the job and the physical capacities (specific physical traits) a worker must have to meet those required by many jobs (perceiving by the sense of vision), and also the name of a specific capacity possessed by many people (having the power of sight). The worker must possess physical capacities at least in an amount equal to the physical demands made by the job.

Physical Demand Codes are as follows:

1 -- Strength (Lift, Carry, Push, Pull):

	Maximum Lift	Frequent Lift/Carry
S Sedentary.....	10 lbs.	
L Light.....	20 lbs.	Up to 10 lbs.
M Medium.....	50 lbs.	Up to 25 lbs.
H Heavy.....	100 lbs.	Up to to 50 lbs.
V Very Heavy.....	Over 100 lbs.	Over 50 lbs.

2 -- Climb and Balance

3 -- Stoop, Kneel, Crouch, Crawl

4 -- Reach, Handle, Finger, Feel

5 -- Talk, Hear

6 -- See (Acuity, Depth Perception, Field of Vision, Accommodation)

Environmental Conditions

Environmental Conditions are the physical surroundings of a worker in a specific job. A worker may be located outside, inside, or both. A job is considered "inside" if the worker spends approximately 75 percent or more of the time inside, and "outside" if the worker spends approximately 75 percent or more of the time outside. A job is considered "both" if the activities occur inside or outside in approximately equal amounts.

Associated working condition codes are as follows:

1 -- I Inside (75 percent or more)

O Outside (75 percent or more)

B Both

2 -- Extremes of Cold plus temperature changes

3 -- Extremes of Heat plus temperature changes

4 -- Wet and Humid

5 -- Noise and Vibration

6 -- Hazards

7 -- Fumes, Odors, Toxic Conditions, Dust, Poor Ventilation

Mathematical Development and Language Development

Commonly referred to as "tool knowledges," these embrace those aspects of education (formal and informal) of a general nature that contribute to the acquisition of such skills but do not have a recognized, fairly specific occupational objective, ordinarily obtained in elementary, high school, or college environment and augmented by past experiences and self-study. Following are the definitions and scale levels applicable to each:

a. Mathematical Developmental or Arithmetic Computation: The acquisition of basic mathematical skills, not specifically vocationally-oriented, such as the ability to solve arithmetic, algebraic, and geometric problems ranging from fairly elemental to dealing with abstractions.

b. Language Development or Literacy Training: The acquisition of language skills, not specifically vocationally oriented, such as mastery of an extensive vocabulary; use of correct sentence structure, punctuation, and spelling; and an appreciation of literature.

Level	Mathematical Development	Language Development
6	Advanced calculus: Work with limits, continuity, real number systems, mean value theorems, and implicit function theorems. Modern algebra: Apply fundamental concepts of theories of groups, rings, and fields. Work with differential equations, linear algebra,	Reading: Read literature, book and play reviews, scientific and technical journals, abstracts, financial reports, and legal documents Writing: Write novels, plays, editorials, journals, speeches, manuals, critiques,

Level	Mathematical Development	Language Development
	infinite series, advanced operations methods, and functions of real and complex variables. Statistics: Work with mathematical statistics, Mathematical probability, and applications, experimental design, statistical inference, and econometrics.	poetry, and songs. Speaking: Conversant in the theory, principles, and methods of effective and persuasive speaking, voice, and diction, phonetics, and discussion and debate.
5	Algebra: Work with exponents and logarithms, linear equations, quadratic equations, mathematical induction and binomial theorems, and permutations. Calculus: Apply concepts of analytical geometry, differentiations and integration of algebraic functions with applications. Statistics: Apply mathematical operations to frequency distributions, reliability, and validity of tests, normal curve, analysis of variance, correlation techniques, chi-square application and sampling theory, and factor analysis.	Same as Level 6
4	Algebra: Deal with system of real numbers; linear quadratic, rational, exponential; logarithmic, angle, and circular functions, and inverse functions; related algebraic solution of equations and inequalities; limits and continuity, and probability and statistical inference. Geometry: Deductive axiomatic geometry, plane and solid; and rectangular coordinates.	Reading: Read novels, poems, newspapers, periodicals, journals, manuals, dictionaries, thesauruses, and encyclopedias. Writing: Prepare business letters, expositions, summaries, and reports, using prescribed format, and conforming to all rules of punctuation, grammar, and spelling.

Level	Mathematical Development	Language Development
	Shop Math: Practical application of fractions, percentages, ratio and proportion, mensuration, logarithms, slide rule, practical algebra, geometric construction and essentials of trigonometry.	Speaking: Participate in panel discussions, dramatizations, and debates. Speak extemporaneously on a variety of subjects.
3	Compute discount, interest, profit, and loss; commission, markups, and selling price; ratio and proportion, and percentages. Calculate surfaces, volumes, weights, and measures. Algebra: Calculate variables and formulas, monomials and polynomials; ratio and proportion variables; and square roots and radicals. Geometry: Calculate plane and solid figures, circumference, area, and volume. Understand kinds of angles, and properties of pairs and angles.	Reading: Read a variety of novels, magazines, atlases, and encyclopedias. Read safety rules, instructions in the use and maintenance of shop tools and equipment, and methods and procedures in mechanical drawing and layout work. Writing: Write reports and essays with proper format, punctuation, spelling, and grammar, using all parts of speech. Speaking: Speak before an audience with poise, voice control, and confidence, using correct English and well-modulated voice.
2	Add, subtract, multiply, and divide all units of measure. Perform the four operations with like common and decimal fractions. Compute ratio, rate, and percent. Draw and interpret bar graphs. Perform arithmetic operations involving all American monetary units.	Reading: Passive vocabulary of 5,000-6,000 words. Read at rate of 190-215 words per minute. Read adventure stories and comic books, looking up unfamiliar words in dictionary for meaning, spelling, and pronunciation. Read instructions for assembling model cars and airplanes. Writing: Write compund and complex sentences, using cursive style, proper end punctuation, and employing adjectives and adverbs.

Level	Mathematical Development	Language Development
		Speaking: Speak clearly and distinctly with appropriate pauses and emphasis, correct pronunciation, variations in word order, using present, perfect and future tenses.
1	Add and subtract two digit numbers. Multiply and divide 10s and 100s by 2, 3, 4, 5. Perform the four basic arithmetic operations with coins as part of a dollar. Perform operations with units such as cup, pint, and quart; inch, foot, and yard; and ounce and pound.	Reading: Recognize meaning of 2,500 (two or three syllable) words. Read at a rate of 95-120 words per minute. Compare similarities and differences between series of numbers. Writing: Print simple sentences containing subject, verb, and object and series of numbers, names and addresses. Speaking: Speak simple sentences, using normal word order, and present and past tenses.

APPENDIX B:

SOURCES OF LABOR MARKET INFORMATION APPLICABLE FOR EMPLOYMENT AND TRAINING PROGRAM PLANNING

Strategic employment program planning is a process of examining a local labor market to determine the problems that are most persistent, the population groups affected, and the available jobs for which those persons can be made employable. This appendix identifies selected data that may be analyzed by employment program planners to assess economic conditions in a local labor market. It is not a comprehensive treatment of all available labor market information for analytical purposes. The attempt is to identify only current data of particular importance to strategic employment program planning. Planners are encouraged to contact source agencies for a detailed explanation of each data item identified.

Bureau of Employment Security Reports/Data Items

Publications
- LMI Newsletter
- Annual Planning Information
- Directory of LMI
- Affirmative Action Information
- Technical Services Monographs
- LMI on Special Worker Groups
- Occupational/Industrial Projections to 1990 (available fall 1982)
- Occupational Staffing Patterns
- Occupational Wages in Manufacturing and Nonmanufacturing Industries
- Occupational Licensing Requirements

Data Items
- Current Employment Statistics (CES)
- Labor Turnover Statistics (LTS) (available for 1981 and prior years only)
- Employment, Wages, and Contributions (ES-202)
- Employment Security Automated Reporting System (ESARS)
- Applicants and Nonfarm Job Openings by Classification (ESARS, T-96)
- LMI Analytical Table Series
- Local Area Unemployment Statistics (LAUS)
- Characteristics of the Insured Unemployed (ES-203)
- Lawrence Berkeley Laboratory Data (LBL)
- Survey of Income and Education (SIE)

Other Agency Reports Information
- Census Series (Demographics, Economic)
- Summary Manpower Indicators
- Current Population Reports
- U.S. Industrial Outlook
- BLS Area Wage Surveys
- Current Population Survey
- Employment and Earnings
- Occupational Outlook Handbook
- Employment and Training Report of the President
- Economic Report of the President
- Occupational Information System
- Career Information Delivery System

References for Interpreting LMI

- Standard Industrial Classification Manual (SIC)
- Dictionary of Occupational Titles (DOT)
- ETA Glossary of Terms
- Cross-Code Index
- BLS Handbook of Methods

Reference Agencies

- Bureau of Employment Security
- Maine Occupational Information Coordinating Committee (MOICC)
- Bureau of Labor Statistics (Regional Office)
- Government Printing Office Bookstores
- U.S. Department of Commerce (District Office)